



ARC-IT V8 Workshop

INTEGRATION PROCESS

Merging Architectures

- Finding the best way to address current stakeholders needs/concerns for ITS, including connected vehicle
- *Architecture*
 - National ITS Architecture – based on 1990s concepts
 - CVRIA – based on current ISO 42010 standard for architectures
 - Use CVRIA's viewpoint structure
- *Scope*
 - National ITS Architecture – bound by ITS User Services (last updated 2005)
 - CVRIA – CV applications from US, EU, AUS
 - Use expanded/ing scope



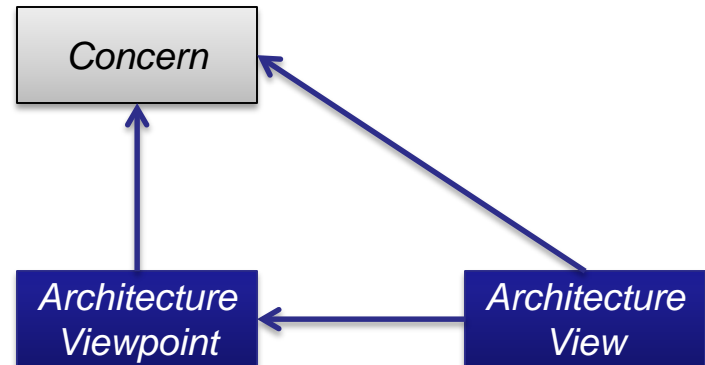
Merging Architectures

- *Look & Feel*
 - CVRIA developed consistent look across all applications drawings (colors, placement, encoding)
 - Merged National Architecture will use CVRIA's look-and-feel for Service Packages
- *Terminology*
 - Applications or **Service Packages**?
 - **Physical Objects** or Physical Entities
 - Application Objects or Equipment Packages?
 - Functional Objects
- *Security*
 - V7.1 Security Areas
 - CVRIA+ Securing ITS



Merging Architectures: Fundamentals

- Concerns were different, so viewpoints were different
 - 7.1 included more “hard” operations such as maintenance activities
 - CVRIA focused on system interfaces
 - 7.1 focused on strategic planning
 - CVRIA focused on system implementation



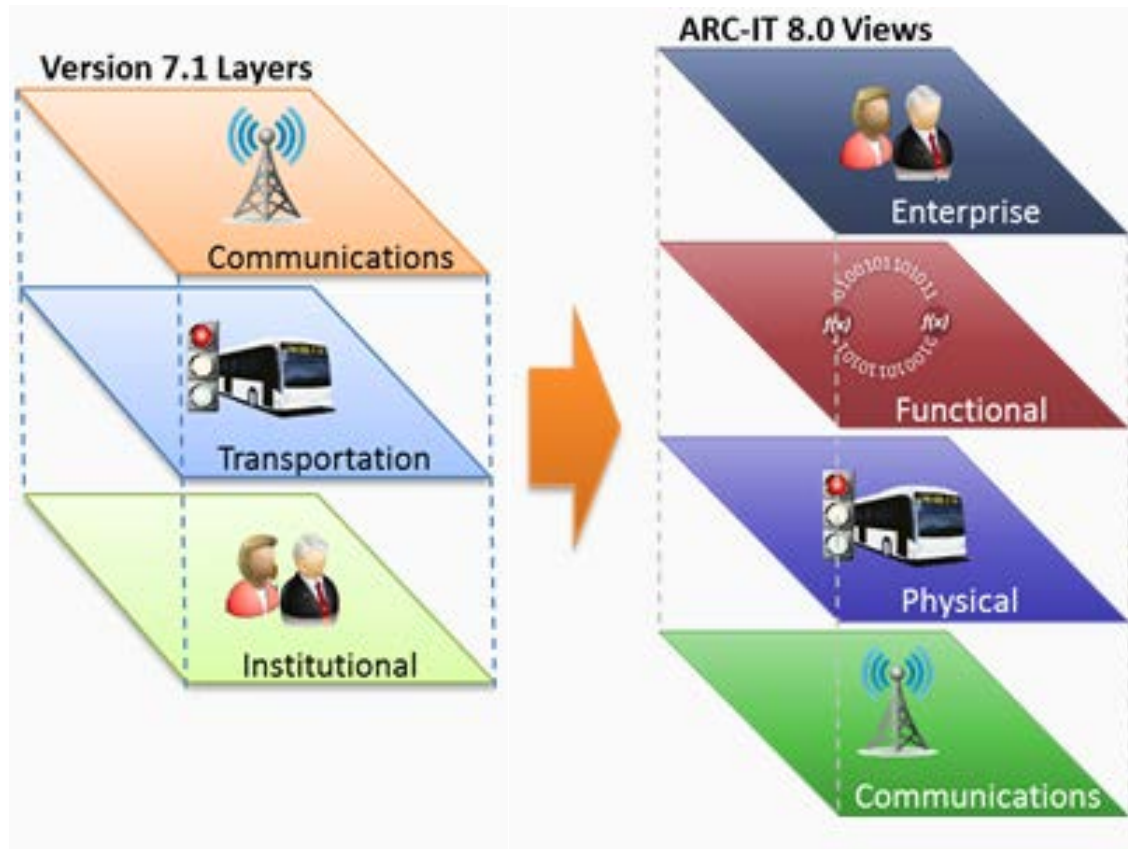
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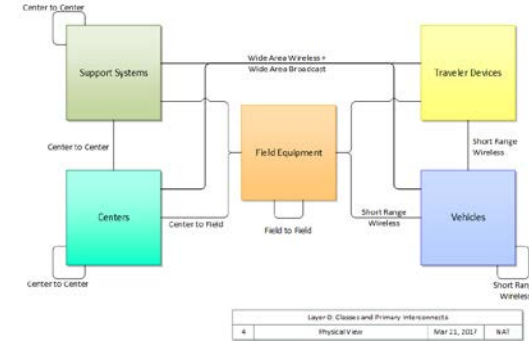
Merging Architectures

- Layers → Views

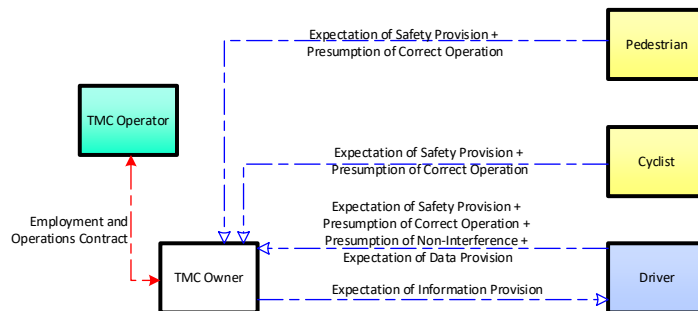


Getting There: Prioritization

- What does planning use today?
 - Physical first
- What do projects use today?
 - Communications next
- What should we use next?
 - Enterprise, Functional later

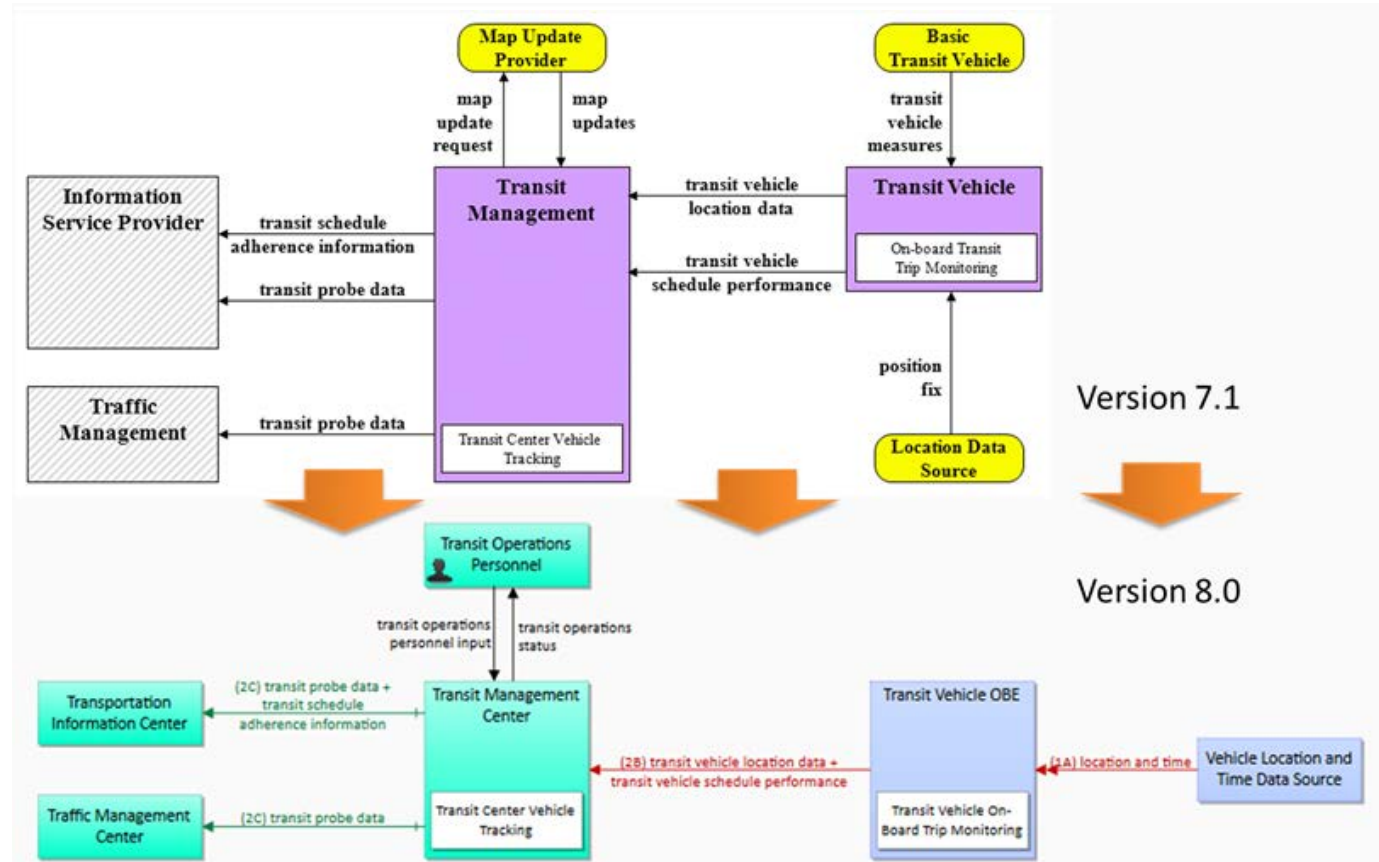


NTCIP-SNMP	
information on violators -->	
Enforcement Center	Commercial Vehicle Check Equipment
ITS Application Information Layer Undefined	ITS Application Information Layer Undefined
Application Layer IETF: SNMP	Application Layer IETF: SNMP
Presentation Layer ISO ASN.1 BER	Presentation Layer ISO ASN.1 BER
Session Layer Undefined	Session Layer Undefined
Transport Layer NTCIP: 2201-TCP / UDP / T2 NULL	Transport Layer NTCIP: 2201-TCP / UDP / T2 NULL
Network Layer NTCIP: 2202-IP	Network Layer NTCIP: 2202-IP
Data Link Layer NTCIP: 2101-PMPP / V Series Modem, NTCIP: 2102-PMPP / FSK Modem, NTCIP: 2103-PPP, NTCIP: 2104-Ethernet	Data Link Layer NTCIP: 2101-PMPP / V Series Modem, NTCIP: 2102-PMPP / FSK Modem, NTCIP: 2103-PPP, NTCIP: 2104-Ethernet
Physical Layer Backhaul PHY	Physical Layer Backhaul PHY



Service Package Drawings

- 97 v7.1 Service Packages / 96 CVRIA Applications
 → 133 v8 Service Packages



Support Content

- Support Service

- A Service Package that

- provides a service necessary for another SP to operate, and
 - Does not provide a transportation service, and
 - Is managed in the transportation domain

- Example:

- Location and Time: “...provide accurate location and time to intelligent transportation system devices and systems.”

- Support Object

- A Physical Object that...



Combined/Merged Architecture

- Continue to support regional planning and project implementation

