



# **Connected Vehicle Architecture Workshop**

## CVRIA Website Tour

June 16, 2016

# Workshop Agenda

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- Introduction 9:00 AM
- CVRIA Overview 9:20 AM
- CVRIA Website Tour 9:50 AM
- National ITS Architecture / CVRIA Integration 10:20 AM
- Break 10:35 AM
- Attendee Feedback on CVRIA 10:50 AM
- SET-IT Software Tour 11:20 AM
- SET-IT Use Example 11:50 AM
- Wrap-up 12:20 PM
- Adjourn 12:30 PM

# CVRIA Website

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- Organizes the architecture content in a layered hypertext format
- Allows for easy and quick targeted access to topics of interest
- Is updated as CVRIA evolves

# CVRIA Website Address

<http://www.iteris.com/cvria/>

**CVRIA** CONNECTED VEHICLE REFERENCE IMPLEMENTATION ARCHITECTURE

Google Custom Search

Comment on Page

About Applications Views Standards Resources Glossary Contact Us

Home

## Connected Vehicle Reference Implementation Architecture

Welcome to the Connected Vehicle Reference Implementation Architecture (CVRIA) Website! This site is your tool for reviewing, providing feedback, and using the architecture content for standards and project development. CVRIA is being developed as the basis for identifying the key interfaces across the connected vehicle environment which will support further analysis to identify and prioritize standards development activities. CVRIA will also support policy considerations for certification, standards, core system implementation, and other elements of the connected vehicle environment.

As shown in the figure, CVRIA is developed in 4 Views:

- Enterprise - Describes the relationships between organizations and the roles those organizations play within the connected vehicle environment
- Functional - Describes abstract functional elements (processes) and their logical interactions (data flows) that satisfy the system requirements
- Physical - Describes physical objects (systems and devices) and their application objects as well as the high-level interfaces between those physical objects
- Communications - Describes the layered sets of communications protocols that are required to support communications among the physical objects that participate in the connected vehicle environment

Another way to view the architecture is from the perspective of the connected vehicle safety, mobility, environmental, and support applications. Each application page shows the subset of each of the views that pertain to that application.

The project is sponsored and led by the [USDOT's ITS JPO](#), under the management of the ITS Architecture and Standards Programs and in cooperation with the Systems Engineering and Test Bed Programs.

### Latest News

CVRIA has been updated to Version 2.2. In CVRIA 2.2, the separate "Signal Phase & Timing" application has been removed and the "Connected Vehicle Map Management" application is now, simply, "Map Management." Other smaller changes have been made to the Communications, Enterprise, and Physical views to support SET-IT. [Click here to see the details of What's changed in CVRIA 2.2!](#)

The Systems Engineering Tool for Intelligent Transportation (SET-IT) Version 2.2.29 is available as a download from the [Tools page](#). In addition to supporting all of the updated and newly added CVRIA content, this version includes simplified Layer 1 diagrams and updates to the ConOps generation so that a template based on IEEE Standard 1362 / IEEE 29148 can also be used. See the [Tools page](#) and [Readme file](#) for more details.

### Stakeholder Feedback

Feedback is encouraged as the CVRIA is developed and maintained. Key stakeholder activities include:

- Reviewing the architecture views
- Reviewing the standards development plan
- Providing inputs for policy development and review policy options

### Connected Vehicle Reference Implementation Architecture

**Enterprise View**  
Relationships between Organizations

**Functional View**  
Logical Interactions between Functions

**Physical View**  
Connections between Physical Objects, Users, and Applications

**Communications View**  
Layered communications protocols between Physical and Application Objects



# Tour Highlights

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- Home page
  - Menu Bar
  - Breadcrumbs
  - JPO link in footer
  - Last update for webpage
  - Latest News
  - Stakeholder Feedback; link to email
  - Comment link in top right corner references page on site
  - 4 Views hyperlinked to details

# About Menu

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- Background information on
  - Connected Vehicle Program
  - Architecture specifications
  - Approach to architecture development
  - Viewpoints
  - Security

# Viewpoints

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- Skip Applications for now
- Viewpoints provides access to 4 views of architecture
  - Enterprise
  - Functional
  - Physical
  - Communications

# Standards

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- Explanation of the standards program and environment
- Standards plan that analyzed and prioritized the interfaces defined in the CVRIA in the context of standards development opportunities





# Remaining Menu tabs

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- Resources
  - Databases
  - Diagrams
  - Documents
  - Presentations
  - Tools
  - Training
- Glosssary
- Contact us

# Applications

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- Types (Environmental, Mobility, Safety, Support)
- Groups
- Applications
  - Can think of them as market packages in the National ITS Architecture
- International Applications icon

# Select an Application

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- Select Transit Signal Priority
- Description
- Upper Right hand box
  - Type (mobility)
  - Groups (Traffic Signals)
  - Basis of information or disclaimer
  - While on the topic, look at Sources tab which provides source documents used for application definition

# Application Menu Tabs

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- Enterprise
- Functional
- Physical
- Application Interconnect
- Communications
- Requirements
- Security

