Connected Vehicle Plugfest

FHWA Webinar Presentation
September 11, 2017

OMNIAIR
CONSORTIUM

OmniAir Consortium

- Founded in 2004
- Conformance and Interoperability for Transportation Technologies
- Diverse Membership

  Device Suppliers, Laboratories, Test Equipment/Software Providers Engineering Firms, Agencies, Research Institutions and ITS Deployment Services
- Industry Conformance / Certification Development and Communications Media Independent
- Certification Services through Testing and Program Scope

OMNIAIR CONSORTIUM

INTEGRITY SECURITY SERVICES
A Green Hills Software Company

UL

MET LABORATORIES

escrypt
Embedded Security by ETAS

HNTB

Panasonic

onBoardSecurity

kapsch

TransCore

E470

E-ZPass

3M

MTA Bridges and Tunnels

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

THE PORT AUTHORITY OF NEW YORK & NEW JERSEY

ATKINS

MT METROPOLITAN TRANSPORTATION COMMISSION

DEKRA

eTRANS SYSTEMS

SAVARI™

LEAR CORPORATION

Wayties

IBI GROUP

SPIRENT

CohdaWireless™

Chemtronics®

DANLAW

7layers
A Bureau Veritas Group Company

CETECOM™

Anritsu

SGS

SwRI
SOUTHWEST RESEARCH INSTITUTE

intertek

NXP

eSys 이씨스

KETI Korea Electronics Technology Institute

RENESAS

KEYSIGHT TECHNOLOGIES

VENIAM

TÜV SÜD

EVC Enterprise Ventures Corporation
An Affiliate of Concurrent Technologies Corporation

TTA Telecommunications Technology Association

iTtelecom
Information Technology & Telecom co.,Ltd

ROHDE&SCHWARZ

MEMBERSHIP OPPORTUNITIES & ENGAGEMENTS

Working Groups

- *Certification Policy*
- *Automotive Cybersecurity*
- *Connected Vehicle Certification*
- *Tolling Certification*
- *Emerging Technologies*

Events

- *Plugfests*
- *Roundtables*
- *Workshops*

Policy

- *NHTSA V2V NPRM*
- *FCC Spectrum Docket*
- *Briefings with key Government Officials*

Timeline for V2X Device Certification Program

June

Finalized CV Conformance Assessment Program and Certification Policy

July 14

Announced Demonstration Project for Test Labs and Test Tool Providers

August 1

Initiated audits for test tool qualification and lab authorization

Early September

First OmniAir Authorized Test Lab

Late September

Applications open for initial device certifications

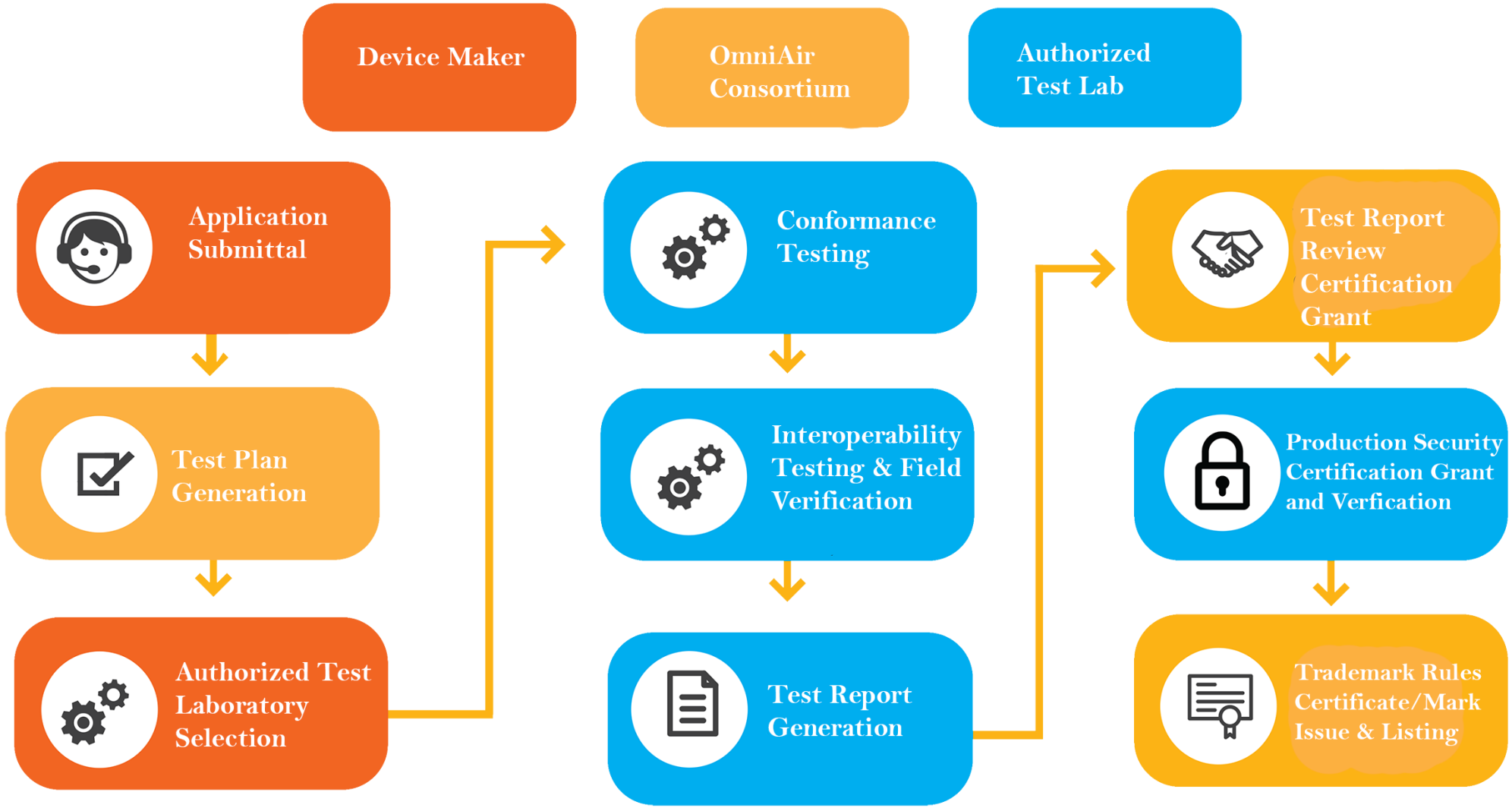
October

Formal Launch of V2X Certification Program

Oct. 16-20

OmniAir hosts V2X Plugfest in San Francisco Bay Area

OMNIAIR TESTING AND CERTIFICATION OVERVIEW



V2X Certification Conformance Release 1 (Based on 2016 Standards)

- IEEE 802.11p Physical Layer
- IEEE 1609.2 Security/Certificates
- IEEE 1609.3 Network (including WSA)
- IEEE 1609.4 Multi-Channel Operations
- SAE J2945.1 V-V BSMs Minimum Performance (laboratory setting)
- Message Interoperability (laboratory setting)

V2X Certification Release 2

- Applied Interoperability
- Field Testing

OmniAir V2X Device Plugfest

October 16 – 20

- First industry-sponsored Plugfest in two parts:
- One-day Connected Vehicle Workshop at MTC offices in San Francisco
- Four-day Device Testing at UL facilities in Fremont, CA
  - ✓ Bench Conformance Testing
  - ✓ Interoperability Testing
  - ✓ Field Testing
  - ✓ Security / Certificates / SCMS
  - ✓ Test Equipment Providers & Introduction/Interface

INTEGRITY Security Services, Inc., is providing test Enrollment Certificates and Pseudonym Certificates to End Entity OBU and RSU devices participating in OmniAir's PlugFest this October.

A key objective of this PlugFest is to verify the ability of an End Entity (EE) to obtain these certificates from the SCMS using the CAMP-defined protocols.

To obtain certificates for the OmniAir PlugFest, End Entity (EE) companies will need to

- Register on the ISS V2X website (www.ghsiss.com/v2x) for test certificates
- Implement the CAMP-specified EE to SCMS messages
- Handle the subsequent SCMS responses to obtain and Enrollment Certificate
- Request Pseudonym Certificates and to download the Pseudonym

Once an Enrollment Certificate is obtained, a Pseudonym Certificate request can then be made directly of the ISS Test Certificate Management System.

Details on this process may be found in the FAQ on the website once you have registered for PlugFest test certificates at www.ghsiss.com/v2x

Monday, October 16	Connected Vehicle Workshop

Opening Remarks	Jason Conley, OmniAir Consortium
Mobility Innovation in SF	Andrew Fremier, Metropolitan Transportation Commission
OmniAir & Interoperability	Dave Kristick, E-470 Public Highway Authority James Hofmann, North Texas Tollway Authority
Keynote Presentation	Jonathan Walker, U.S. Dept. of Transportation (invited)

Panel 1 - 2X Interoperability and Testing

Colorado DOT, Panasonic, UL, Danlaw

Panel 2- Connected Vehicle Interoperability Around the World

E-Zpass, ITS Korea, Spirent, Transport Canada

Panel 3 - Automotive Cybersecurity

Integrity Security Services, OnBoard Security, General Motors, NHTSA (invited), Monument Policy Group

Panel 4- Future Trends in Connected and Automated Vehicles

MTC, Toyota, Qualcomm, Contra Costa Transportation Authority, HERE Technologies

Closing Remarks & Reception

October 17, 18, 19, 20	Plugfest Device Testing Fremont, CA

- Hosted at UL laboratory facilities in Fremont
- Test labs and test equipment providers will be on-site, conducting testing sessions and assisting vendors:
  - UL, 7Layers, Intertek, 3M, Anritsu, Spirent, Keysight, Danlaw, DEKRA, Rohde & Schwartz, INTEGRITY Security Systems, OnBoard Security
- 170 bench testing sessions (1.75 hours each)
- 10 field testing sessions (accommodating 30 devices)
- Multiple group interoperability testing sessions
- Technical education sessions on relevant topics throughout the week

Agenda - Activities Running Parallel to Test Sessions

Tuesday October 17

8:00 am	Introductions	UL
8:30 am	Testing Overview	OmniAir & 7Layers
10:30 am	Security 101 & Certificates	INTEGRITY Security Services
1:00 pm	Security 101 & Certificates	Onboard Security
2:00 pm	Standards IEEE & SAE	Kevin Smith & David Kelley
4:00 pm	Connected Vehicle Pilots	TBD

Wednesday, October 18

8:00 am	Announcements	UL / OmniAir
8:30 am	Laboratory Spotlight	7Layers (Authorized DSRC V2X Lab)
9:30 am	Test Equipment Spotlight	Spirent (Validated Test Cases)
10:30 am	Test Equipment Spotlight	Danlaw
1:00 pm	Test Equipment Spotlight	Anritsu
2:00 pm	Test Equipment Spotlight	Keysight
3:00 pm	Test Equipment Spotlight	3M
4:00 pm	Test Equipment Spotlight	TBD

Thursday October 19

8:00 am	Announcements	UL / OmniAir
8:30 am	Security 101 & Certificates	INTEGRITY Security Services
10:00 am	Security 101 & Certificates	OnBoard Security
1:00 pm	CV Technical Committee	OmniAir & 7Layers
3:00 pm	Group Interoperability	OmniAir
4:00 pm	Emerging Technology Committee	MTA and HNTB

Friday October 20

8:00 am	Announcements	UL / OmniAir
8:30 am	Policy Committee	UL
10:00 am	Spring 2018 Plugfest Info & Survey	OmniAir

Test Cases in Bench Setting to be Conducted

Validated:	802.11p, IEEE 1609.3 WSM/WSA, IEEE 1609.4 WSM/WSA
Validated Message Decoding:	BSM, MAP, SPAT, TIM & WSA per J2735
Verifying:	IEEE 1609.2 /Certificates, IEEE 1609.3 & .4 IPv6 & J2945/1
Device Profiles:	V2V & V2I
Trial:	Group Interoperability (Transmit & Receive) and Group Field Vehicle Testing Interoperability (OBU & RSU)

Test Equipment per Standards / Requirements

IEEE 802.11p PHY:	Danlaw (TCI), Rhodes-Schwarz, Anritsu & Keysight
IEEE 1609.2 Security/Certificate:	Danlaw (TCI), Spirent (TCI) & 3M
IEEE 1609.3 Network:	Danlaw (TCI) & Spirent (TCI), Anritsu & Keysight
IEEE 1609.4 Multi-Channels:	Danlaw (TCI) & Spirent (TCI), Anritsu & Keysight
IEEE 1609.12 PSIDs & SAE J2735 Messages:	3M
SAE J2945.1 (V2V):	Spirent & SwRI (pathHistory)
SCMS Processing:	TBD
RSU 4.1a (V2I):	Message Decoding Only

Device Requirements & Testing

Test Equipment Interface:	TCIs per 802.11p, 1609 and J2945/1
Test Case & TCI Specs:	***https://github.com/certificationoperatingcouncil/COC_TestSpecs***
PSIDs: per Message Types:	0x7F (test) and specific for test cases.
Security Certificates:	Fall 2017 Plugfest or CAMP QA versions
Bench Testing per Test Cases:	Wired (no Over-The-Air)
Group Interoperability:	Wireless / Over-The-Air

OmniAir V2X Plugfest
Technical Preparation Awareness Webinar

Open to all vendors, test labs, test equipment providers considering participating in October Plugfest

Tuesday, September 12 at 12:00 EDT

https://global.gotomeeting.com/join/463220829

Technical Questions: Randy Roebuck +1-202-656-9791

Registration Questions: Ryan Hall +1-202-744-6480

Contact us

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