

MEET IN ASIA PACIFIC FOR THE
WORLD'S LEADING TRANSPORT TECHNOLOGY EVENT

ACTIVATING GLOBAL MOBILITY SOLUTIONS

ITS—ENHANCING LIVEABLE CITIES AND COMMUNITIES



2016
MELBOURNE

23rd World Congress on Intelligent Transport Systems

Melbourne Convention and Exhibition Centre

10–14 October 2016



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**Next Stage Certification Environment
for Connected Vehicles**



Presentation Outline

- Intro to OmniAir / OmniAir Certification Services (OCS)
- Certification Process & Framework
- OmniAir / WiFi Alliance Agreement
- Module Level Testing vs. Vehicle Level Testing
- Key Takeaways





OmniAir Consortium & OmniAir Certification Services (OCS)

OmniAir is the leading trade association committed to the development of certification in intelligent transportation.

- Certification policy, structure, development
- Support of national tolling interoperability
- Support of standards for certification for electronic payments, connected vehicle, tolling, road use charging, commercial vehicles and applications

OmniAir Certification Services (OCS) is an independent sister organization of OmniAir. We independently certify to the specifications that OmniAir or any other client develops.



OmniAir Consortium & OmniAir Certification Services (OCS)

Members

Vendors: Kapsch TrafficCom, Raytheon, 3M, TransCore, Xerox, Panasonic, Arada

Public Sector: IAG, E470, MTA, MTC, NTTA

Consultants: HNTB, Atkins, IBI

Testing Organizations: MetLabs, CTC, UL, SwRI, 7Layers, Danlaw, Cetecom, Rhode and Schwartz, EVC, SI

OmniAir Supports the Following Areas

OmniAir

Road Use Charging

ODOT
Western Road Use Charge

Tolling Certification

National Interoperability
6C (sticker tags)

Connected Vehicle

USDOT
OEMs
Tier One Suppliers

Commercial Vehicles

Electronic OnBoard Recording Devices

Applications

Applications for all of the functional areas listed to the left

OCS

OmniAir Certification Services

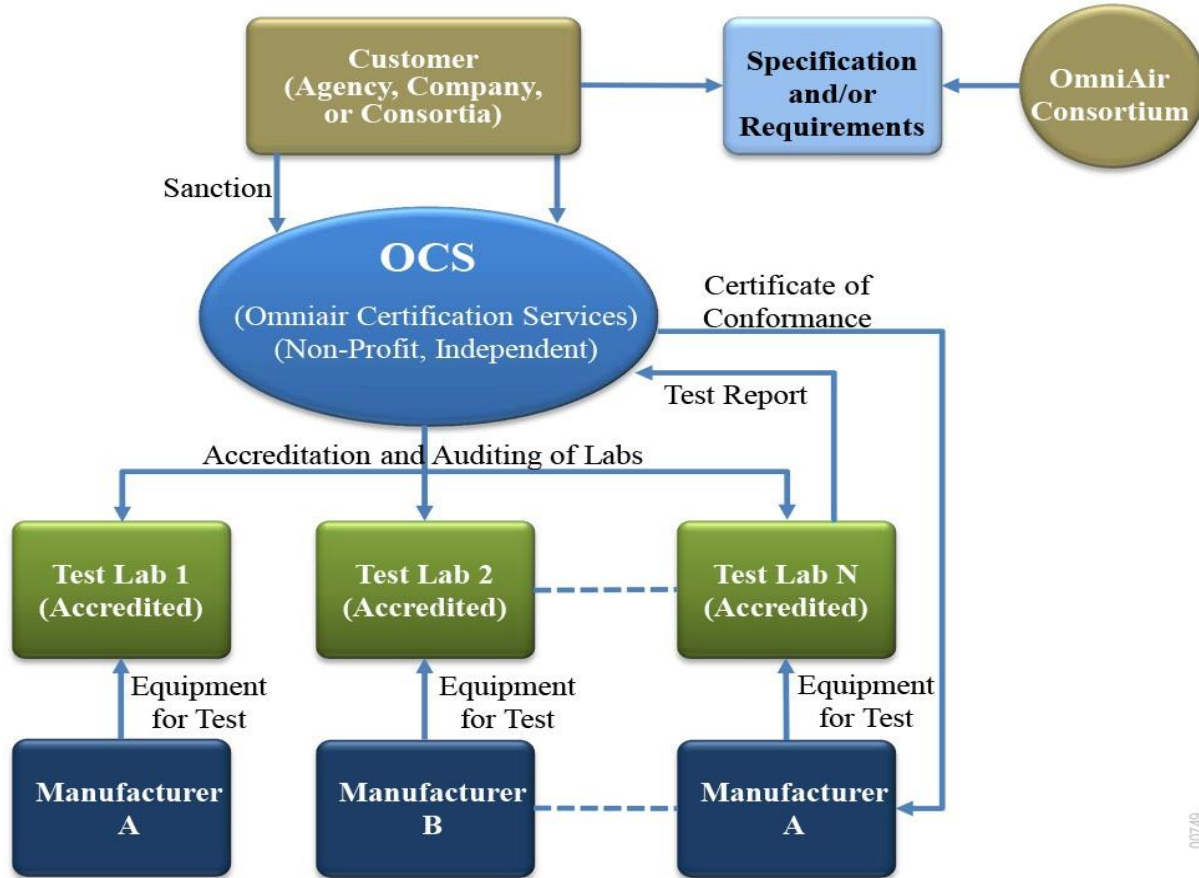
(independent certification body supporting OmniAir and Others)

Testing and public agencies ONLY: MetLabs, CTC, WSDOT





OmniAir OCS Certification Process



00749





OCS Certification Architecture

Branding & Commitments (Layer-4)

- OCS grants certification mark
- End-User committed to buy certified devices

Accreditation (Layer-3)

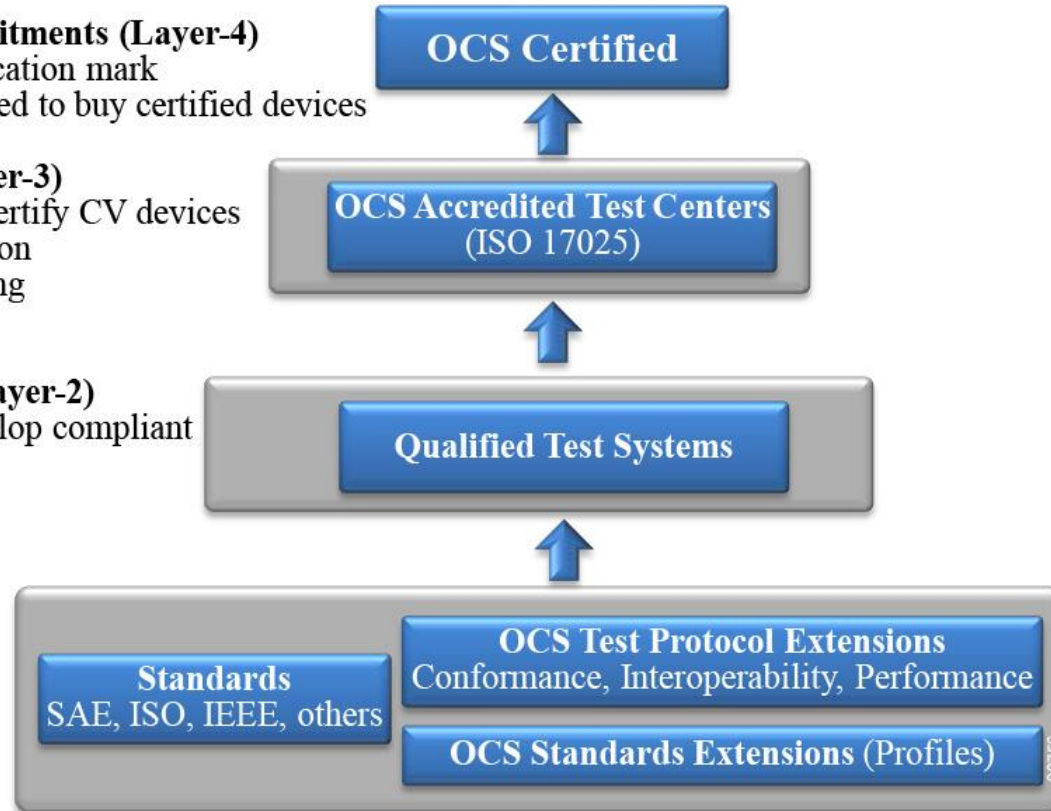
- OCS test centers certify CV devices
- Test suites validation
- Lab and field testing

Test Equipment (Layer-2)

- Help vendors develop compliant devices

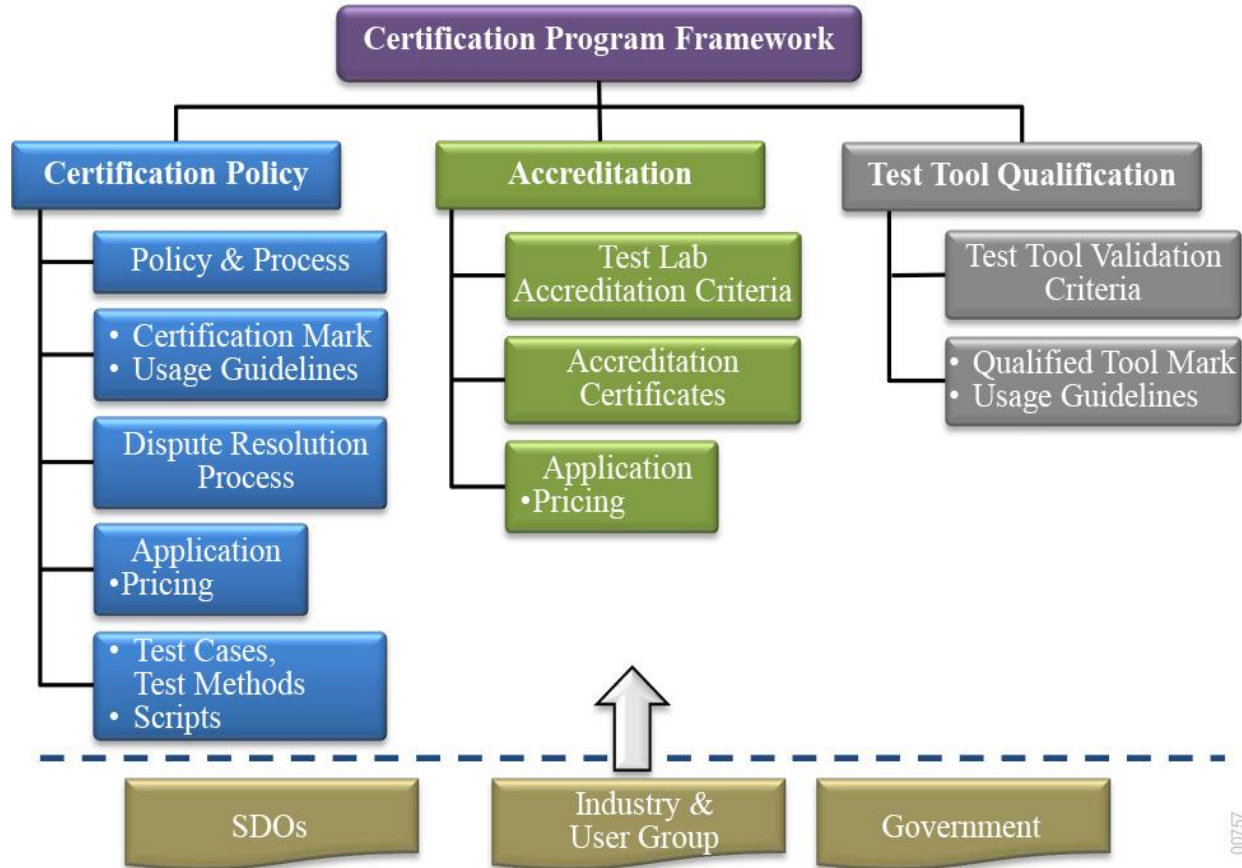
Standards Baseline (Layer-1)

- Standards
- Test protocols & Suites





OCS Certification Program Framework



00757



Board of Directors - OmniAir

Directors	Organization
Dave Kristick, Chair	E-470 Public Highway Authority
Jason JonMichael	HNTB
Ted Osinski	MetLabs
Timothy Baker	MTA Bridges & Tunnels
Andrew Fremier	Metropolitan Transportation Commission
James Hofmann	North Texas Tollway Authority
Michael Stelts	Panasonic
Mark Muriello	Port Authority of NY & NJ
JR Richardson	Raytheon
Dick Schnacke	TransCore
Chris Body	Kapsch
Dmitri Khijniak	7layers
PJ Wilkins	E-Z Pass
Suzanne Murtha	ATKINS

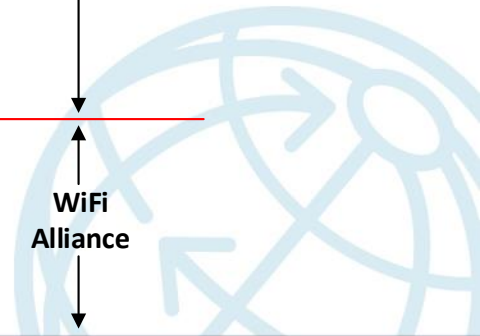
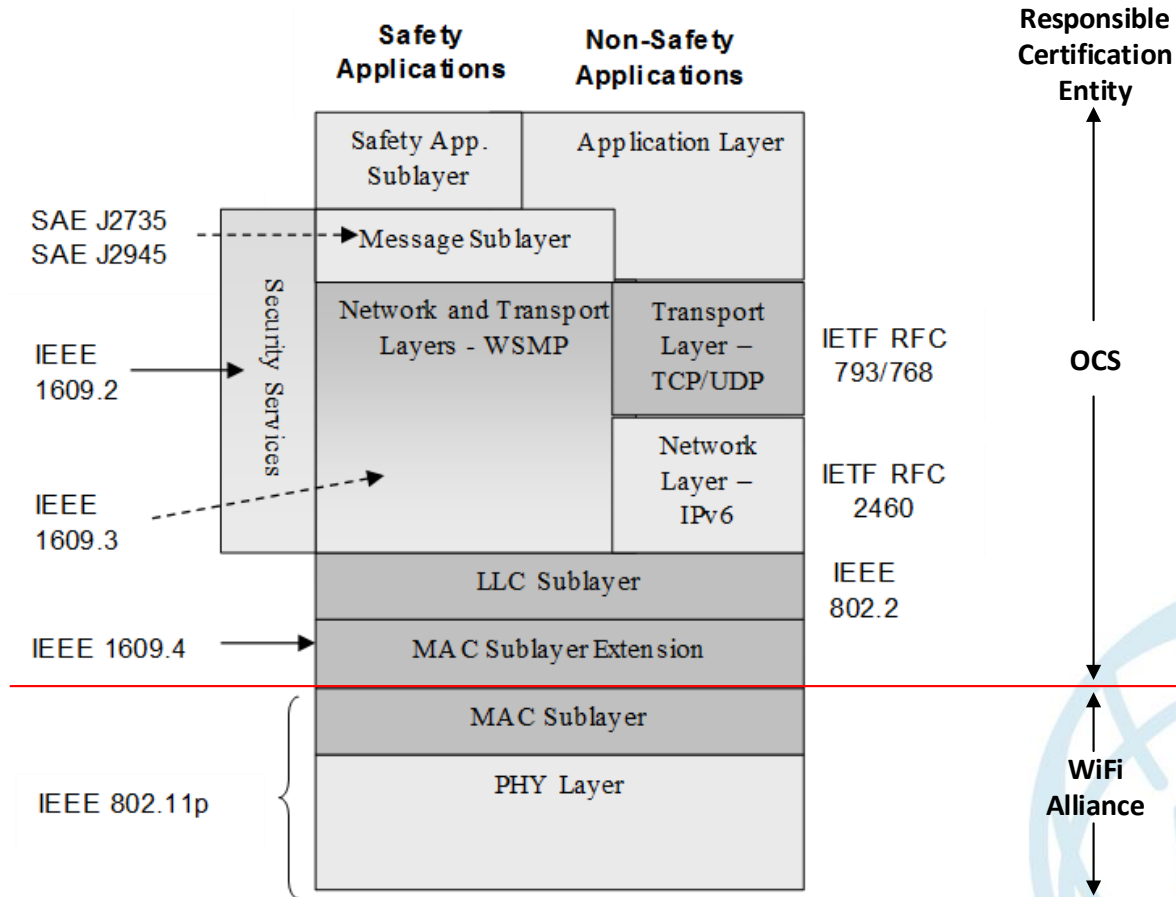
Membership Trends



<u>Membership</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Executive	15	16	16
Associate	5	14	22
Affiliate	3	3	1
Total	23	33	39



Wi-Fi Alliance Agreement

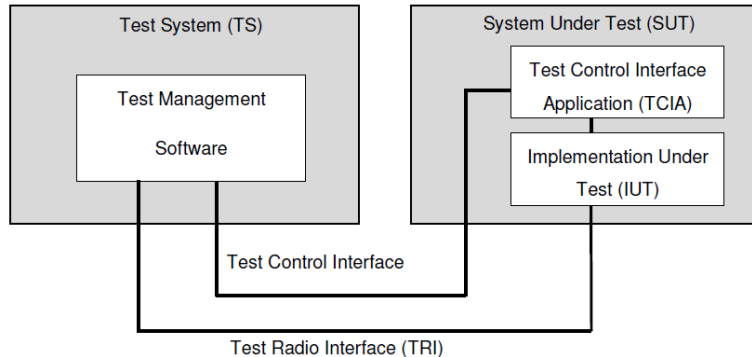




OmniAir
Certified

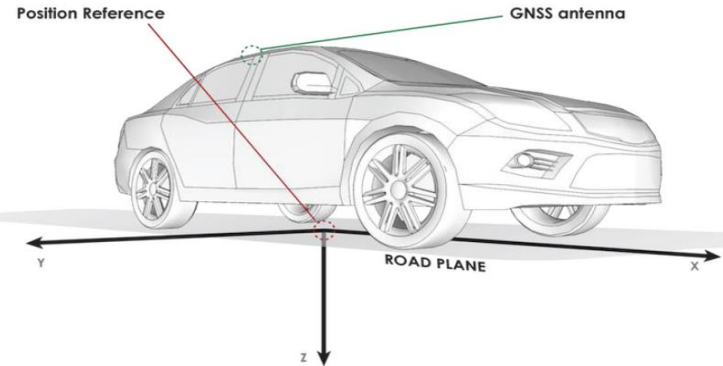
Module Level Testing

- Component Suppliers
- Fully exercise lower layers and individual data elements
- Controlled / Repeatable Tests
- Automated = Cost Effective



Vehicle Level Testing

- OEMs / Regulating Agencies
- Conformance testing at “system level”
- Positioning system accuracy
- Tx Performance Reqs
- Test Track / Rotation Table



Key Takeaways

- Awareness of OmniAir / OCS
- Understanding of OCS Certification Process & Framework
- Understanding of where OCS fits in the overall certification landscape
- Understanding of Levels of Testing





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Thank You!

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