SAE’s perspective on Connected Vehicle

ISO and ITU Joint workshop
Kyoto, Japan
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SAE International Asia-Pacific Operations
Vehicle is now connected
and a part of cooperative systems

V2V, V2I

V2G
Key standards V2V, V2I space

**SAE J2735 – DSRC Message Set Dictionary**

- Supports interoperability among DSRC applications
- Defines standardized message sets, data frames and data elements
- Defines formats for basic safety message, emergency vehicle alert message, generic transfer message, probe vehicle data message and a common safety request message.
- Intended for application developers, equipment manufacturers and system integrators

**SAE J2945 – DSRC Minimum Performance**

- Specifies the minimum communication performance requirements of the DSRC message sets, the associated data frames and data elements defined in SAE J2735 DSRC Message Set Dictionary.
- Defines message transmission rate, channel usage, optional data usage in various situations
Cooperative Systems
Standards Organizations

JAMA, JARI

SAE International

IEEE

ETSI

ITU
# Key standards in V2G space

## J2836™

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<th>Use Cases</th>
<th>Detailed Info (Messages)</th>
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* published

## J2931 Protocol (Requirements)

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Harmonization in V2G space

- Not every country has the same electrical system
- Charging needs differ for vehicle type (PEV/PHEV)
- Charging needs differ for charging locations
Summary

• SAE’s position on harmonization:
  — Reduces cost
  — Improves products’ quality
  — Increases consumer confidence

• Automotive industry is involved in SAE International standardization process

• SAE is focusing on updating of critical standards

• SAE activities aligned with US Department of Transportation’s strategy in V2V and V2I

• SAE International identified as a leading standards organization identified in NIST Framework and Roadmap for Smart Grid Interoperability Standards

• SAE activities in V2G are harmonized with ISO and IEC work
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