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Comment Received From: Anne Smart

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ChargePoint Comments on VGI Standard - Dec 7 Slides

Attached are modified slides presented as a comment at the workshop on December 7, 2016.

Additional submitted attachment is included below.

-chargepoin+

ChargePoint's perspective on ISO/IEC 15118

VGI Communications Standards
Joint Staff Workshop (CEC, CPUC)
CEC - Rosenberg Room - Sacramento, CA

Craig Rodine – Director, Standards

7 December 2016



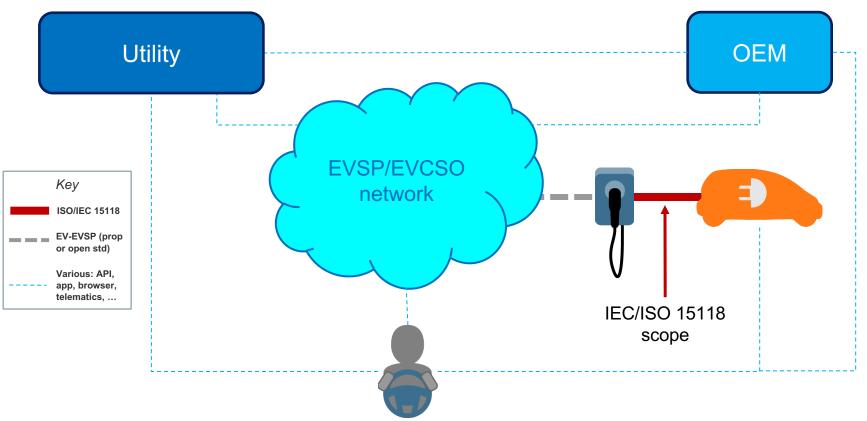
Summary

- + The ISO/IEC 15118 series of standards is a mature, viable technology for present and future EV charging infrastructure.
- + ChargePoint is investing in further development of 15118: R&D projects, standards development, and supporting auto OEM EV roadmaps.
- + 15118 does not fully address some business and technical aspects of the EV charging infrastructure framework that's been effective and successful in CA and throughout North America.
 - For example: roles and motivations of site owner and service provider
- + Transitions and scale matter: need to support today's EV drivers, site hosts, and a potential continuing *majority of EVs* supporting non-standard communications

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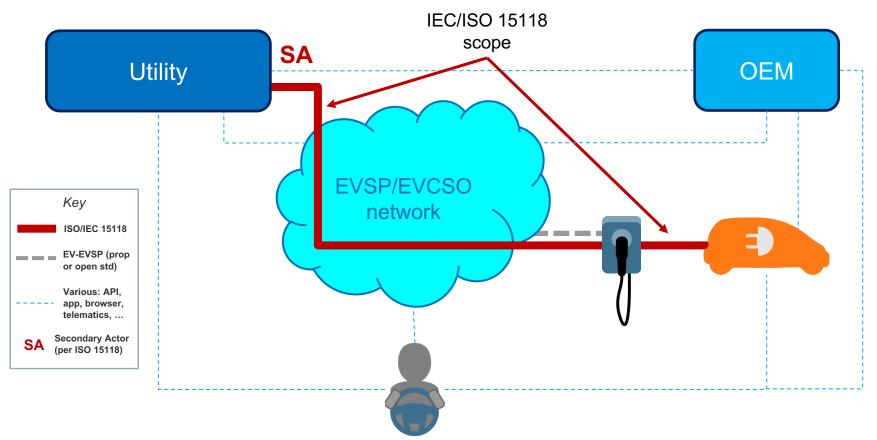
VGI Ecosystem and IEC/ISO 15118 Scope -chargepoints

(narrowest interpretation)



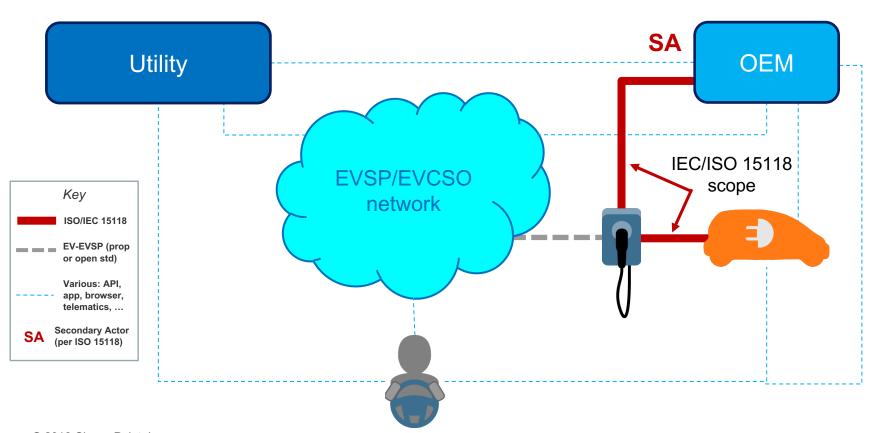
IEC/ISO 15118 Scope (effective, intended use)

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IEC/ISO 15118 Scope (potential alternative use)

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IEC/ISO 15118 VGI prototype application -chargepoin+ (CEC EPC 14-078) OpenADR 2.0b **Utility** OEM **NEMA** roaming (not in project scope) **ISO/IEC 15118** EVSP/EVCSO Key network ISO/IEC 15118 SA EV-EVSP (prop or open std) Various: API. app, browser, telematics, ... **15118 support: Secondary Actor** (per ISO 15118) CNMP, OCPP, X © 2016 ChargePoint, Inc.



Concluding points

- + We see no technical show-stoppers, but there is work to be done on business models and system architecture to integrate ISO/IEC 15118 into California's EV charging networks.
- + We also urge the Commission to require the development and public availability of a <u>model of EV charging load and its impact on the grid</u>, including controls on, for starters (not exhaustive):
 - Number of EVs deployed and growth rates
 - Concentration of EV charging loads on grid circuits
 - Customer (driver and site owner) incentives and % participation
 - Value (\$) of DR and Energy services to all stakeholders

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Thank You

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