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Road vehicles — Vehicle to grid communication interface —

Part 202: Extensible SECC Discovery Protocol and Event Notification Protocol

Véhicules routiers — Interface de communication entre véhicule et réseau électrique —

Partie 202: Protocole de découverte SECC extensible et protocole de notification d'événements

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Foreword

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This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

A list of all parts in the ISO 15118 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Road vehicles — Vehicle to grid communication interface —

Part 202:
Extensible SECC Discovery Protocol and Event Notification Protocol

1 Scope

This document specifies the Extensible SECC Discovery Protocol (ESDP) as well as the Event Notification Protocol (ENP) that are intended to be used in conjunction with other protocols as defined in ISO 15118-2 and ISO 15118-20 as well as documents from other organizations such as DIN or SAE (e.g. DIN/TS 70121 or SAE J2847/2).

These protocols can be used in addition to the existing SECC Discovery Protocol defined by the aforementioned documents. They offer additional functionality that makes the digital communication for EV charging more robust and allows to better determine the reason of failures.

In this document, the scope is limited to the already existing communication protocols. Thus, it is only an addition to already existing communication protocols. Basic requirements regarding for example IP communication, or the Vehicle-To-Grid Transport Protocol (V2GTP) are not needed, as they are already specified in the respective document of the used communication protocol.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*

ISO 15118-2, *Road vehicles — Vehicle-to-Grid Communication Interface — Part 2: Network and application protocol requirements*

ISO 15118-20, *Road vehicles — Vehicle to grid communication interface — Part 20: 2nd generation network layer and application layer requirements*

ISO 5474-2, *Electrically propelled road vehicles — Functional and safety requirements for power transfer between vehicle and external electric circuit — Part 2: AC power transfer*

ISO 5474-3, *Electrically propelled road vehicles — Functional and safety requirements for power transfer between vehicle and external electric circuit — Part 3: DC power transfer*

ISO/IEC 8824-1, *Information technology — Abstract Syntax Notation One (ASN.1) — Part 1: Specification of basic notation*,

ISO/IEC 8825-7, *Information technology — ASN.1 encoding rules — Part 7: Specification of Octet Encoding Rules (OER)*

IEC 61851-1, *Electric vehicle conductive charging system - Part 1: General requirements*

IEC 61851-23, *Electric conductive charging system - Part 23: DC electric vehicle charging station*

RFC 4122, *A Universally Unique IDentifier (UUID) URN Namespace*

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RFC 6066, *Transport Layer Security (TLS) Extensions: Extension Definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15118-2, ISO 15118-20, IEC 61851-1, IEC 61851-23 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
SI unit
unit of measurement

[SOURCE: Reference [12]]

3.2
element
complex structure which can contain other complex structures or *parameters* (3.4)

EXAMPLE A SEQUENCE or SEQUENCE OF.

3.3
local grid
electrical grid to which the EV is connected to

Note 1 to entry: It includes all attached energy providers and energy consumers until the grid connection point.

3.4
parameter
variable whose name and type of values are specified

EXAMPLE Types may be INTEGER or UTF8 string.

[SOURCE: ISO 13584-31:1999, 3.2.4]

4 Abbreviated terms

ASN.1	Abstract Syntax Notation One
CCS	Combined Charging System
CSMS	Charging Station Management System
EMSP	E-Mobility Service Provider
ENP	Event Notification Protocol
ENPMsg	Event Notification Protocol Message
ESDP	Extensible SECC Discovery Protocol
ESDPReq	Extensible SECC Discovery Protocol Request
ESDPRes	Extensible SECC Discovery Protocol Response
EV	Electric Vehicle
EVCC	Electric Vehicle Communication Controller
EVSE	Electric Vehicle Supply Equipment
IPv6	Internet Protocol version 6
LSB	Least Significant Byte

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