

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Information exchange for electric vehicle charging roaming service –
Part 1: General**

**Échange d'informations pour le service d'itinérance de la recharge des
véhicules électriques
Partie 1: Généralités**

Preview

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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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The text of this International Standard is based on the following documents:

FDIS	Report on voting
69/654/FDIS	69/659/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63119 series, published under the general title *Information exchange for electric vehicle charging roaming service*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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Preview

INFORMATION EXCHANGE FOR ELECTRIC VEHICLE CHARGING ROAMING SERVICE –

Part 1: General

1 Scope

This part of IEC 63119 establishes a basis for the other parts of IEC 63119, specifying the terms and definitions, general description of the system model, classification, information exchange and security mechanisms for roaming between EV charge service providers (CSPs), charging station operators (CSOs) and clearing house platforms through roaming endpoints. It provides an overview and describes the general requirements of the EV roaming service system.

IEC 63119 (all parts) is applicable to high-level communication involved in information exchange/interaction between different CSPs, as well as between a CSP and a CSO with or without a clearing house platform through the roaming endpoint.

IEC 63119 (all parts) does not specify the information exchange, either between the charging station (CS) and the charging station operator (CSO), or between the EV and the CS.

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.

RFC 5246, The Transport Layer Security (TLS) Protocol Version 1.2

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
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3.1

electric vehicle

EV

electric road vehicle

vehicle propelled by an electric motor drawing current from a rechargeable storage battery or from other portable energy storage devices (rechargeable, using energy from a source off the vehicle such as a residential or public electric service), which is manufactured primarily for use on public streets, roads or highways

[SOURCE: IEC 61851-1:2017, 3.4.1, modified – The definition has been expanded.]

3.2
electric vehicle user
EV user

person or legal entity using the vehicle and providing information about its needs

[SOURCE: IEC TS 62913-2-4:2019, Table 3]

3.3
electric vehicle supply equipment
EVSE

equipment or a combination of equipment that provides dedicated functions to supply electric energy from a fixed electrical installation or supply network to an EV for the purpose of charging and discharging

Note 1 to entry: This note applies to the French language only.

3.4
charge service provider
CSP

role that manages and authenticates EV user's credentials and provides the billing and other value-added services to the customer

Note 1 to entry: A CSP is a specialized type of EMSP.

Note 2 to entry: This note applies to the French language only.

3.5
charging station operator
CSO

party responsible for the provisioning and operation of the charging infrastructure (including charging sites), and managing electricity to provide requested energy transfer services

Note 1 to entry: The party shall operate a roaming endpoint to achieve a roaming service.

Note 2 to entry: This note applies to the French language only.

3.6
EMSP
e-mobility service provider

party responsible for providing high-value service related to the use of an EV (renting an EV, reservation of parking service, navigation services, energy services which include charging station provider in relation with CSO...)

Note 1 to entry: This note applies to the French language only.

[SOURCE: IEC TS 62913-2-4:2019, Table 3]

3.7
roaming

information exchanges and related provisions between CSPs, which allow EV users to use a single credential and contract to access services on multiple e-mobility networks and contract to access the charging services provided by multiple CSPs or CSOs through roaming endpoints

3.8**clearing house****CH****mobility clearing house****MCH****roaming platform****e-mobility clearing house****E_MOCH**

optional intermediate actor that facilitates authorization, billing and settling procedure for EV charging service roaming, between two clearing partners

Note 1 to entry: The terms "MCH" (mobility clearing house), "roaming platform" and "E_MOCH" (E-mobility clearing house) in different regions.

Note 2 to entry: This note applies to the French language only.

3.9**credential**

physical or digital asset that carries the roaming service user's identity or contract ID, which is used for authentication and security purposes

EXAMPLES

- static or dynamic QR code;
- username/password;
- RFID card;
- digital certificate transferred through the plug and charge process.

3.10**service detail record****SDR**

data package containing all necessary information within one unique identification which is needed for billing or informing of/about a service session of a specific customer

Note 1 to entry: This note applies to the French language only.

3.11**charging session**

collection of charging transactions at a charge point related only to the charging of an electric car assigned to a specific customer in a specific timeframe with a unique identifier

Note 1 to entry: The charging session is a subset of the service session.

3.12**service session**

collection of services around a charge point mainly related to the charging of an electric car assigned to a specific customer in a specific timeframe with a unique identifier

3.13**charging transaction**

smallest billable part of a charging session representing the transfer of energy in a specific timeframe

3.14**roaming endpoint****RE**

entity containing all the related roaming functions

Note 1 to entry: This note applies to the French language only.

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