

EVRoaming Foundation

Realising cross-border charging



May 2023

EVRoamer

Welcome to the EVRoamer, the newsletter of the EVRoaming Foundation!

The mission of the EVRoaming Foundation is to achieve full EV roaming for everyone in an open and transparent manner, with correct information according to all consumer laws. We aim to ensure cross border access to charging infra networks and support companies and governments with the right information to achieve this.

Together with you, we aim to improving access to charging infrastructure, and to realize better services and for EV drivers.

For this EVRoamer, we have the following news items for you:

- Update from the Board
- OCPI tooling:
- Data collection tool
- Tariff interpretation tool
- OCPI 3.0 progress
- Enriching POI data
- Tariff working group
- The OCPI developer's F2F meeting in April
- OCPI in the US: NEVI
- EVRoaming involved in Smart Charging - Re-ESCAPE project
- EVS36 symposium in Sacramento, US
- New contributors

Update from the Board

Dear contributors,

It has been my absolute pleasure to act as the chair of the EVroaming Foundation since its inception in 2020 and be part of the interim board, designing and preparing the EVRoaming Foundation as we know it today.

But all good things come to an end: after serving two periods, I am stepping down, and I am very happy and grateful to inform you that Roland Ferwerda has been unanimously elected as the chair of the EVRoaming Foundation Board. I will continue to be part of the Board in the capacity of Treasurer and work on the growth and quality of this foundation and OCPI.

Roland Ferwerda has been involved with OCPI since 2015 and has, in his capacity as Director of the National Knowledge Platform for Charging Infrastructure (NKL), funded the development of OCPI between 2016 and 2020, and coordinated the establishment of the EVRoaming Foundation in July 2020. In his role as director for the past years, he has grown this foundation from its inception to its current health, and I am certain that he will continue this work in his new role as Chair of the Board. You can reach Roland at roland.ferwerda@evroaming.org

Michel Bayings, responsible for all operations, and coordinating the development of OCPI, tooling, and working groups, will formally take over the position of Director of the EVRoaming Foundation. It justifies his involvement in OCPI since the early days of 2012, and his valuable work today with all members to grow and expand our work on EV roaming for everyone. You can reach Michel at operations@evroaming.org

I am looking forward to a bright and interoperable future!

With best regards,

Arnaud Mora, CEO of Freshmile.



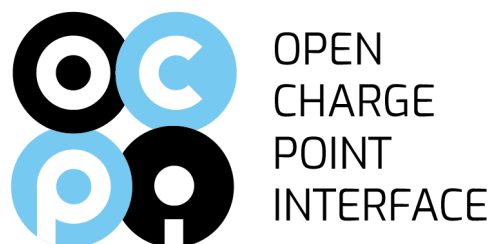
Arnaud Mora



Roland Ferwerda



Michel Bayings



OCPI update

OCPI Tooling: Data collection tool for exporting data from OCPI platforms

A lot of parties are interested in data about charging station usage. These parties range from public bodies to research institutions to commercial business analysis firms.

To get access to this data, they often use custom APIs to be developed by Charge Point Operators (CPOs) or request direct access to the CPO's database systems. These methods work, but they have serious drawbacks. They amount to a lot of extra work for the CPO's IT staff and make it easy for sensitive personally identifiable data to be over-shared.

For this purpose, the EVRoaming Foundation created the OCPI Data Collection tool. This tool aims to enable CPOs to run easy data exports from their OCPI interface. And meanwhile, be more in control of what is shared.

The tool is freely available and fully open source. We hope companies will not only use it but also improve it.

More information about the tool, download, and how to use it can be found at: evroaming.org/ocpi-tools

OCPI Tooling: Tariff interpretation tool

Tariffs are one of the most difficult items in protocols and information exchange. This is mainly caused by the wide variety of tools, caused by business propositions, regulatory requirements, and the wish for a (roaming) protocol to support these propositions as best as possible. This results in a wide variety of possible tariffs and tariff structures that companies exchange.

The main issues that we have noticed:

- Specifications are not always specific, and up for interpretation by the reader
- MSP platforms need to understand all received tariffs for a quality service proposition
- CPO platforms need to publish tariffs as intended
- There's no open and free reference implementation where the tariff exchange can be tested.
- To support organizations with tariff exchange, Tandemdrive created a free command line-based tool with the support of the EVRoaming foundation. It has the following features:
 - Validate cost as specified in a CDR
 - Calculate the subtotals per dimension
 - Provide insight into how the subtotal was calculated

Everyone can download and use this tool free of charge. We hope that this will help companies and improve OCPI tariff implementations. We want to thank Tandemdrive for their great effort on this topic.

More info: evroaming.org/ocpi-tools

OCPI 3.0 progress

OCPI 3.0 is on the move. For a long time, we are working on a better usable, and more efficient version of OCPI. The huge amount of CDRs that are exchanged and the amount of charge stations, each with changing

statuses, requires a new more efficient way of data exchange. That will be the core of OCPI 3.0. We also looked very good at the tariff module, which is one of the most difficult modules to use and implement. And meanwhile, new tariff features are requested, e.g. more different tariffs for a charge point. This will be supported via newly introduced Associations.

But OCPI 3.0 will also contain several other major improvements, which might already be usable in combination with 2.2.1. E.g. an improved smart charging module, servicing also V2X, and an invoice reconciliation module will be introduced to cover the gap between CDRs and invoices and make it easier to match the CDRs with the invoices. Will be ready in the second half of 2023.

The first release of OCPI 3.0 is aimed to be ready at the end of 2023.



Enriching POI data for accessibility, heavy-duty transport, etc.

How do you know if a charge station can be used by heavy-duty trucks, vehicles with trailers, or vehicles for disabled persons?

Currently, there is no standard possibility to identify charge stations for specific vehicle types. The challenge here is to find a balance between enough info for the user to charge, but not too many additional fields making it impossible for operators to complete the data requirements, and for navigation providers to show these additional data in a meaningful way.

The EVRoaming foundation has therefore started research to solve this and is creating a proposal to identify which fields to add to the current POI dataset. Meanwhile, this has drawn the attention of policymakers, who are increasingly focusing on a public charging network for heavy-duty transport and require full compatibility with that network. International organizations are involved such as the European Commission's Sustainable Transport Forum, the Norwegian EV association, the Department of Transport in the UK, and organizations in the US. This way, we assure that a proper discussion takes place on functional needs, before translating these into protocol specifications. It is expected that second half of this year the proposal is ready.



Update from the Tariff Working Group

In January the EVRoaming Foundation started a separate workgroup to discuss issues and solutions concerning EV charging tariffs. We see two main issues that are discussed:

1. Tariff exchange between CPOs and MSPs is done with complex tariffs and huge amounts of different tariff codes are exchanged between parties. No uniform or standardized way agreed on how to reduce complexity and exchange the tariffs.
2. Tariffs are often not understandable for EV drivers. This can be caused by the complex tariff exchanges between CPOs and MSPs, but we also see governments and other organizations that require very complex tariff schemes in public tenders.

Together with the Full Contributors of EVRoaming Foundation, we create a white paper with proposed ways of working to solve the above issues. We don't believe directly that protocols are the issue, although they can also be improved, but more the way they are used.

The white paper is available in June and will be presented at the EV536 in Sacramento (US).

April 11th and 12th

The OCPI developer's F2F meeting in April

11th and 12th April our first Face to Face EVRoaming OCPI developer meeting was organized. In two days, a large group of our contributors discussed all kinds of functions and improvements for OCPI. Although normally our meetings are remote via web conference, these Face 2 Face meetings are great for discussing items requiring more interaction. This time the meeting was hosted by Ihomer in Ettenleur. In the second half of this year, we will organize another one in a different country. These sessions are open for all our Full Contributors.



OCPI in the US: NEVI

NEVI (National EV Infrastructure) is the US national funding program dedicated to strategically deploying charging infrastructure and establishing an interconnected framework. And within NEVI, OCPI has been prescribed as the roaming protocol to be implemented for every public "charging-network to charging-network" communication. By 28 February 2024, these implementations must be finalized, and the US will then have, like California today, an interoperable EV charging network, based on OCPP and OCPI.

We are very grateful for our leading EVRoaming members in the US, who have been very supportive of this initiative and have engaged with the US Department of Transport to express their support.

"FLO EV Charging has been a long-time user of OCPI to enable roaming agreements and give FLO members access to one of the largest number of ports in North America. NEVI requiring OCPI to exchange data is a statement of the value of the open-source protocol that the EV Roaming Foundation has brought to the EV market. We strongly believe standardizing communication will accelerate EV adoption and improve the infrastructure reliability and accessibility."

More information can be found via the official publication in the Federal Register - [National Electric Vehicle Infrastructure Standards and Requirements by the Federal Highway Administratio](#)

EVRoaming involved in Smart Charging - Re-ESCAPE project

The challenge for the transportation sector is to fully integrate renewable energy sources using smart charging infrastructures to maximize the impact on climate goals. The Dutch government-funded Re-ESCAPE project (Resubmission Experiment Smart Charging Algorithms and Protocols for EVs) has explored advanced concepts of smart charging. The project aims to align charging demand with renewable energy availability by connecting EV charging to electricity prices. By implementing smart charging protocol functions and forecasting algorithms, the project successfully shifted charging loads from evening peaks to the night and early morning. As a result, peak demand was reduced and the use of renewable energy increased, thereby successfully contributing to the sustainability goals.

The EVRoaming Foundation has been involved in this project, developing the smart charging protocol requirements with the project partners (and EVRoaming contributors) GreenFlux and Total Energies, assessing them in the project context and the OCPI development working group, and integrating these in the upcoming OCPI 3.0 version.



EVS36: We are going to Sacramento!

The EVRoaming Foundation will join many other leading EV companies and members at the Electric Vehicle Symposium 36 in Sacramento, California. Together we will make the case for open and interoperable EV roaming, and provide information, support, and insights into proper OCPI implementations.

We have our foothold at The Netherlands pavilion with our friends from OCA/OCPP. From there we will organize our information sessions and discussions with the many US public market actors that are working on their NEVI-driven OCPI implementations.

Request: Let us know how we can strengthen your pitch, presentation, or proposition as CPO or eMSP for EV Roaming and OCPI. We are happy to support you with your business, Michel and Roland are present from the EVRoaming Foundation, as well as many other roaming experts in our foundation to expand our base of OCPI implementations and acquire new members.

New members

The EVRoaming Foundation is growing fast. In the last few months, the following companies joined the foundation: S44 LLC, Mogile Technologies Inc. (ChargeHub), Abimex LTD (Nice Car Mate), Electra, Link Consulting, eDRV Inc., GoWithFlow S.A. (trading as Daloop), Wevo Energy, The Rechargers, Metergram LLC, Tesla Motors Netherlands B.V., MOBI.E S.A, Osprey Charging Network, eCamion INC (charging service branded as Jule), Monta ApS, Switch EV Ltd.

They come from all over the world, and we are very happy they joined the EVRoaming Foundation movement and support the OCPI developments.



Do you like the newsletter? Share it!



The EVRoaming Foundation manages and maintains the OCPI protocol and ensures its free availability, to guarantee roaming according to open standards for any EV driver.

www.evroaming.org Contact? Mail: info@evroaming.org



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