eMobility ICT Interoperability Innovation Group
Accelerating E-Mobility to the next level through Open ICT Standards

eMI³ platform for interoperability in ElectroMobility

Jean-Charles Pandazis, ERTICO-ITS Europe
FABRIC conference
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Why are interoperable ICT standards important to eMobility?

- We need to create a seamless driver experience
- Bridge the gap towards compelling products and services that bring EV driving the convenience needed to break the vicious circle
- Support a wide array of potential convenience – and value-adding services
- Without common, harmonised data identifiers, for instance, it will be impossible for a EV driver to roam from his home-charging network to another one for which he does not have a contract.
What benefits do interoperable ICT standards bring?

– Accelerate global EV market development

– Reducing the operational costs and complexity to setup interconnectivity amongst actors and platforms

– Enabling ‘best-of-breed’ services

– Insuring speed, flexibility, and scalability

– Facilitating systems integration
What is the eMI³?

• The eMI³ represents different industries and different countries which are active in the e-mobility ecosystem.
• Evolved in 2012 mainly from the greenEmotion project and therefore has a strong foundation within the EU commission.
• The eMI³ transformed into a non-profit organization within Belgium law (AISBL).
• The organization is consensus based and decisions are taken by a democratic process and every member company has the same right to get involved.
• Because of that the eMI³ can be considered as independent.
### Full members (24)

- allego
- AFIREV
- BELECTRIC
- BMW
- MINI
- BOSCH
- CEIIA
- ChargePoint
- e-on
- EDF
- elaad.nl
- Enel
- Distribuzione
- Gireve
- Ineli
- IBM
- Panasonic
- RECARO
- Schneider Electric
- Siemens
- Sodetrel GROUP EDF
- TNO innovation for life
- TomTom
- Renault

### Associate members (10)

- Alfazer
- CIRCONTROL
- MENNEKES
- Phoenix Contact
- Hubject
- Compagnie Nationale du Rhône

### Supporter members (6)

- bridging IT
- CISC semiconductors
- DTU Technical University of Denmark
- EValu
- FULLCHARGER
- NISSAN

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02.02.1026, Brussels  
FABRIC Workshop
eMI³ – Vision and key beliefs

- An open and cross industry organization is best suited to drive ICT standardization
- Remove key obstacles to, and drive faster the development of a larger global eMobility market
- Drive global growth and utilisation of EV related products and services
- Increase the convenience and adoption rate of electric vehicles.
eMI³ – Scope and Goals

Enable global EV services interoperability by harmonising existing ICT data and protocols, and proposing new ones where none are yet defined;

Strive to rapidly grow a large market by supporting all required business processes to ease and speed-up the introduction of new services and provide a richness of compelling services to EV users;

Harmonise, promote and improve cross-sector implementation;

Liaise and co-ordinate with other EV organisations and initiatives to maximise interoperability and minimise effort.
eMI³ – Organisation and structure

- **eMI³ AISBL General Assembly**
  - **Steering Board**
    - Coordination:
      - ERTICO - ITS Europe
  - Membership sectors:
    - Vehicle Manufacturers;
    - Electric Utilities
    - Charging Point Operators
    - Suppliers (charging points, hardware, software)
    - Service Providers (IT, navigation, mobility and Transport Industry)
    - Academics, NGO’s, non-profit and governments related to Electric Mobility
  - WG1
  - WG2
  - ...
  - WGN
Overview Scope & Actors of eMI³

- EV OEM
- EV
- EVSE
- EVSE OPERATOR
- EV DRIVER
- EVSP

- CITY SERVICE PROVIDER (E.G.: TRAFFIC)
- MOBILITY SERVICE PROVIDER (E.G.: PARKING)
- VEHICLES SERVICES PROVIDER (E.G. STATE OF CHARGE)
- ENERGY SERVICE PROVIDER (E.G. PRICE CURVE)

E-MOBILITY SERVICE PROVIDER
SEARCH & FIND PROVIDER
SMART CHARGING PROVIDER
(E-)MOBILITY CLEARING HOUSE
Results and prospects

• Results 2015:
  – 23/06/2015: submitted document on EV interoperability to DG-Move, released to the public on 16/11
  – 16/11/2015: eMI³ Standard v1.0 released
    • Terms, definitions and abbreviations
    • Part 1: Overview & Use Cases
    • Part 2: Business Objects
  – 01/12/2015: eMI³ AISBL created in December 2015, with:
    • 21 members (19 in the process to sign in), chair is Renault, vice chair Bosch
    • Target is 45 members by the end of 2016
  – 05/12/2015: session @ COP21 on EV interoperability

• Prospect 2016:
  – Focus on Smart charging use case and business objects
  – Increase membership and international visibility
Thank you for your attention

Join us...

We invite all EV market players to join us. Please visit our website: [www.eMI3group.com](http://www.eMI3group.com)

Contact:
Jean-Charles Pandazis, eMI³ coordinator
ERTICO – ITS Europe
jc.pandazis@mail.ertico.com
Standards vs Interoperability

EVSE Attribute – Type of Plug Table

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<th>Specifications / Description</th>
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Overview of main roles and interfaces in focus

Diagram covers possible interfaces. Contents of interfaces are interrelated and strongly depend on the chosen architecture.

Dashed lines: going out of EMI3 scope
Solid lines: within scope of EMI3