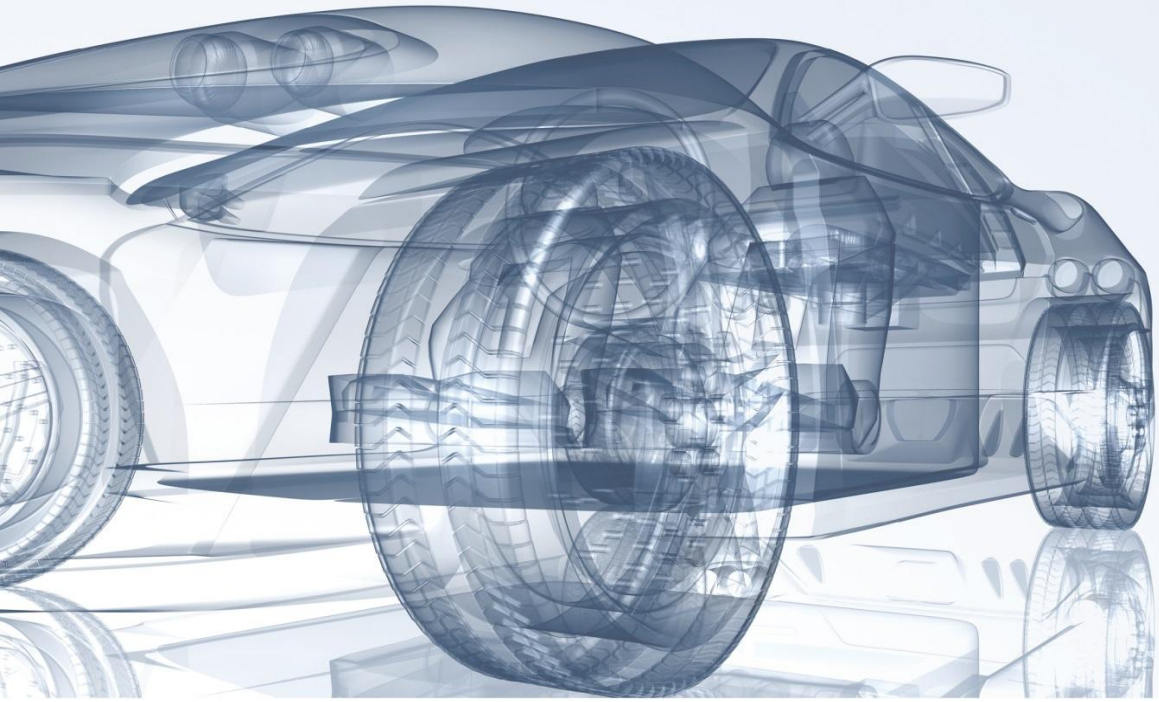
evs 30



The 30th International
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Implementation of E-mobility architecture for providing Smart Grid services using EVs

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Presenter:

- Introduction
- E-mobility architecture
- Communication standards
- Implementation
- Conclusion

Introduction – Smart Grid and EVs

Smart Grid

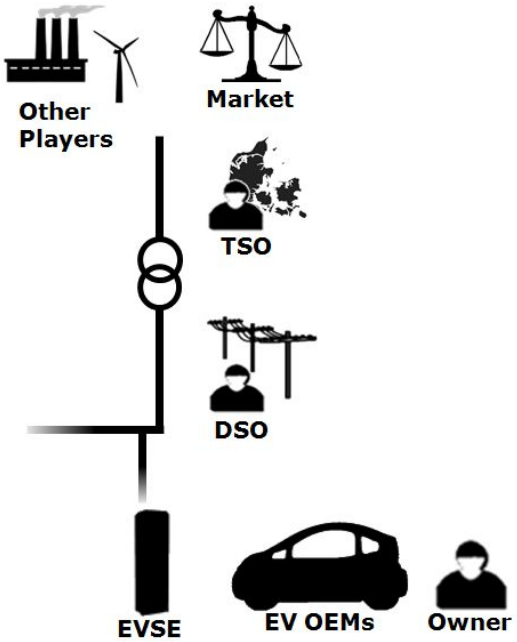
⇩

DER Integration

⇩

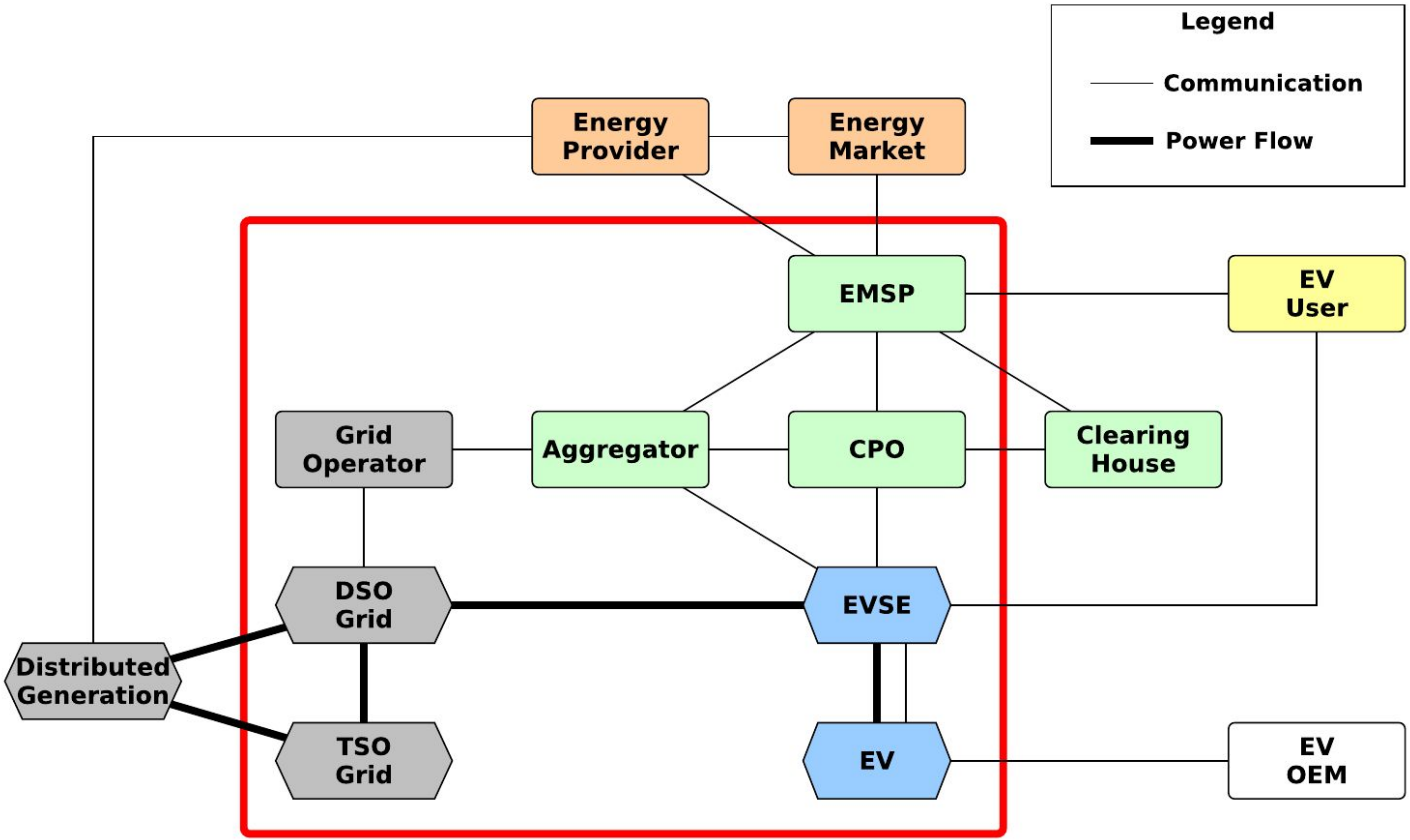
EV Integration

Introduction – Grid services

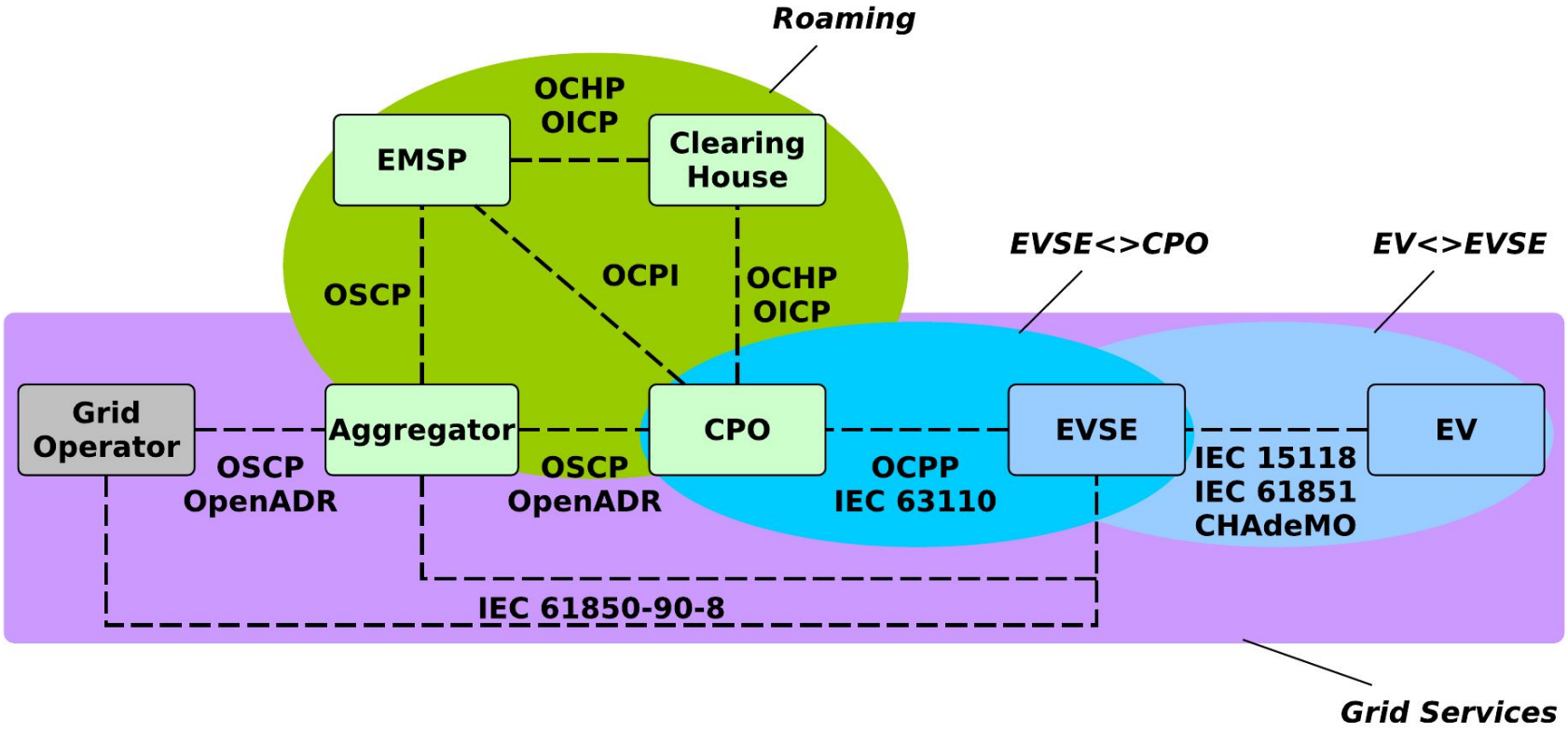


- System wide services:
  - Primary frequency regulation
  - Secondary frequency regulation
  - Synthetic inertia
- Local grid services:
  - Power quality
  - Transformer/Line overloading

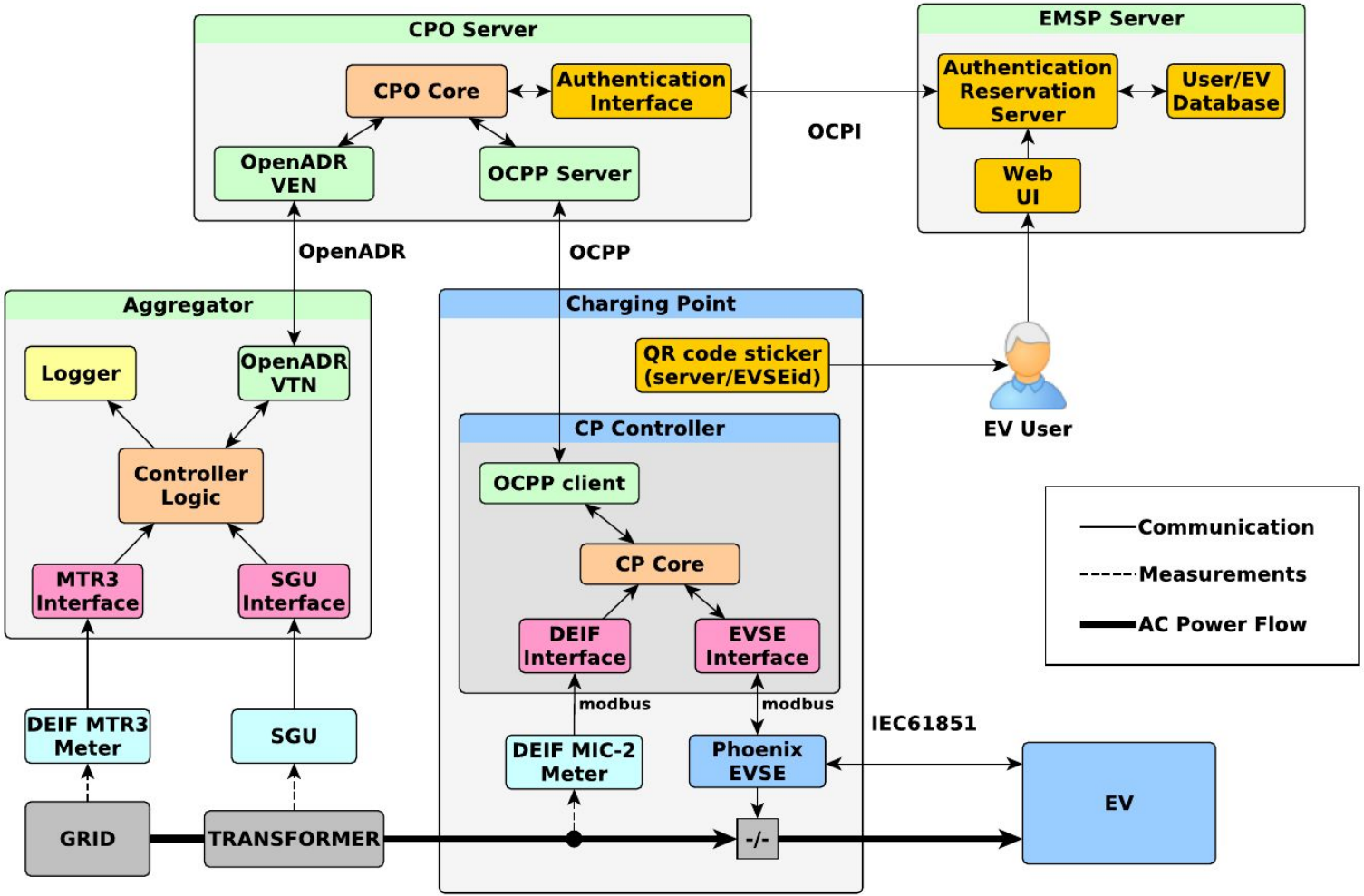
E-mobility architecture



Communication standards

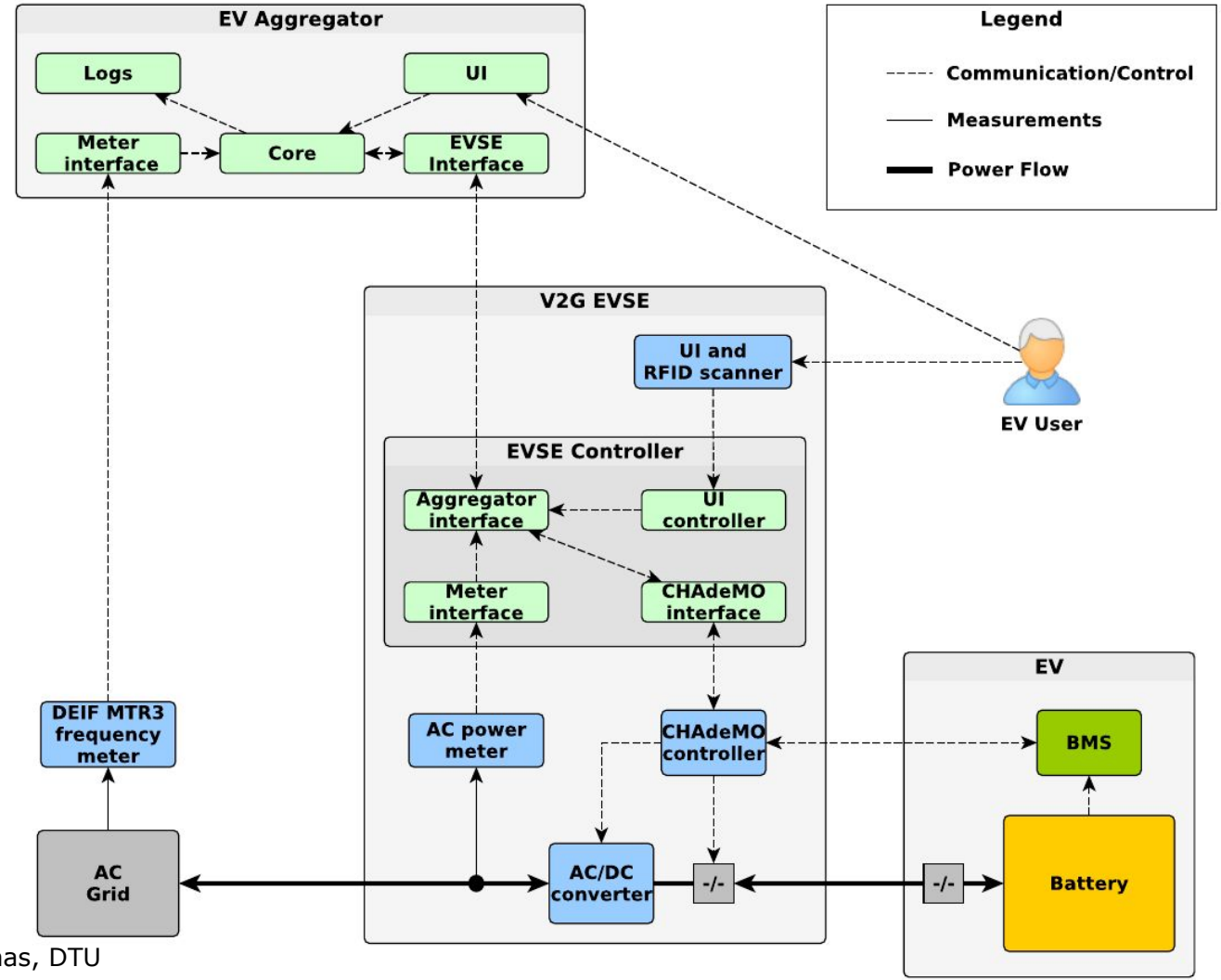


Implementation



Implementation

Other implementations



Conclusion

- **EVs are** already **providing grid services**, using:
  - **IEC 61851** (reached its limitations)
  - **CHAdeMO**
- **Communication** links need:
  - **Standardisation**
  - Improved **security**
  - Grid service **relevant features**
- Still waiting for **OCPP 2.0** and **IEC 15118**

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More info:

www.parker-project.com