ISO 15118 communication over CAN bus

Wireless interoperable Power Transfer - **WiPT**

www.wipt-charging.de

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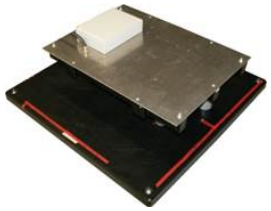
- **Open manufacturer independent standard for public wireless charging**
  IEC 61980-3 Annex AA
  Any vehicle is able to charge on any pad
  Enabling a public infrastructure
  Established certification process
- **Long term field test in public area**
  Proof of stability, usability and safety
  Several years of permanent daily operation of about 5 charging spots and vehicles
- **Wireless communication of ISO 15118 services is integrated**
  Change of the physical layer to WiFi

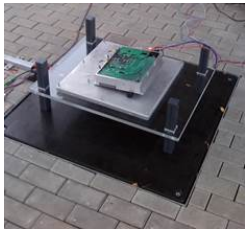
Joint research project “InterOp”

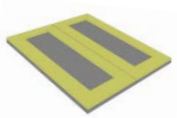
CONDUCTIX wampfler · ifak · SEW · DB · SIEMENS · streetscooter · EAI · e·on · VAHLE

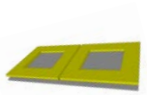
Supported by:
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
on the basis of a decision by the German Bundestag

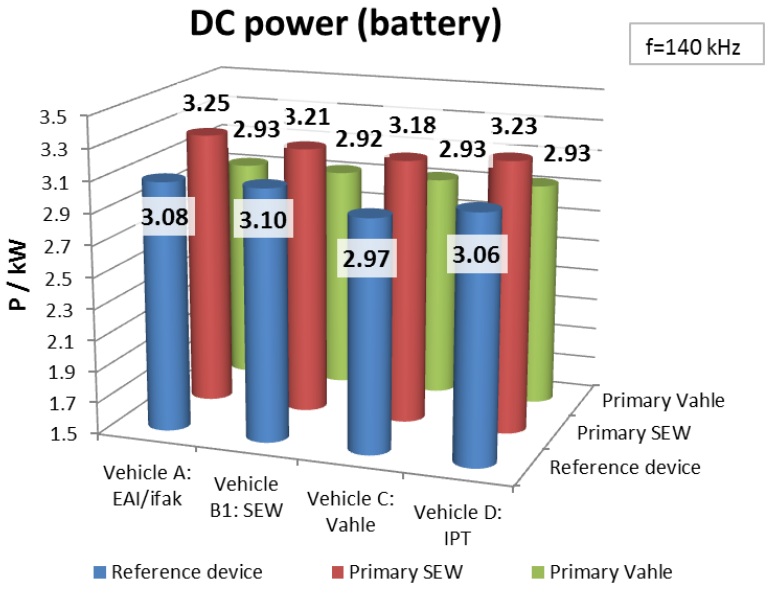
Proof of concept by experimental results

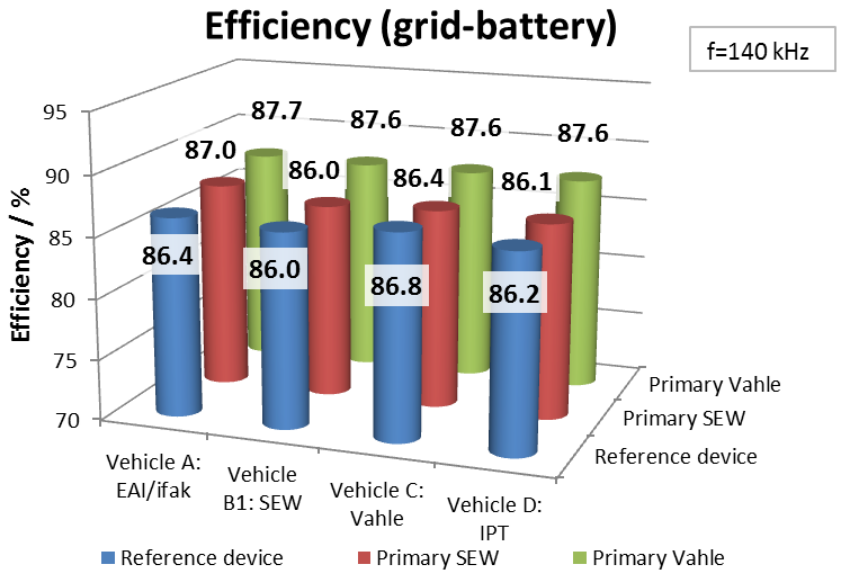








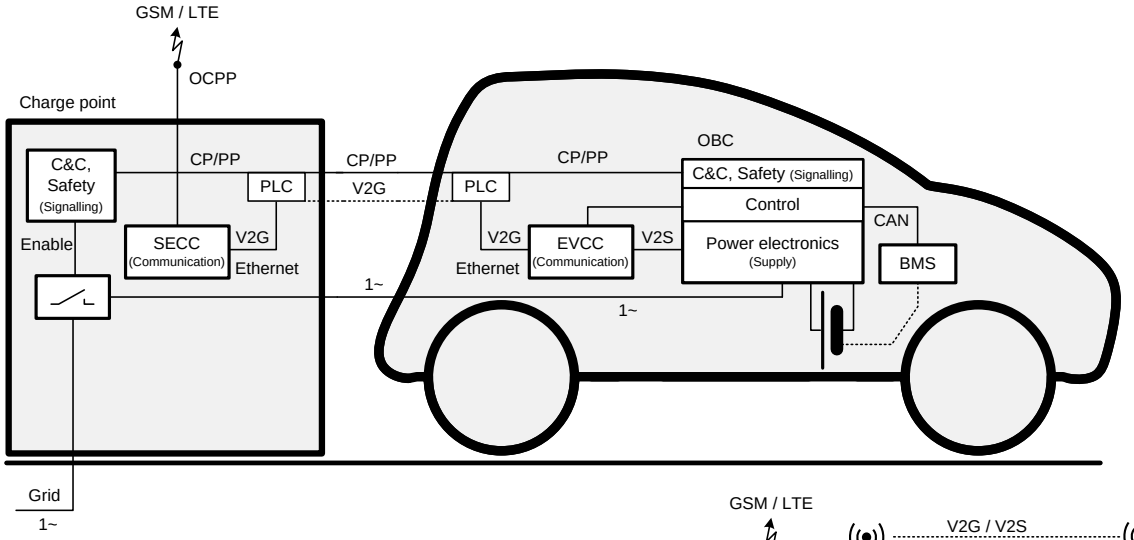




Vehicle ifak, SEW
VehicleVahle, IPT

large area double flat coil
compact Solenoid coil

V2G communication support

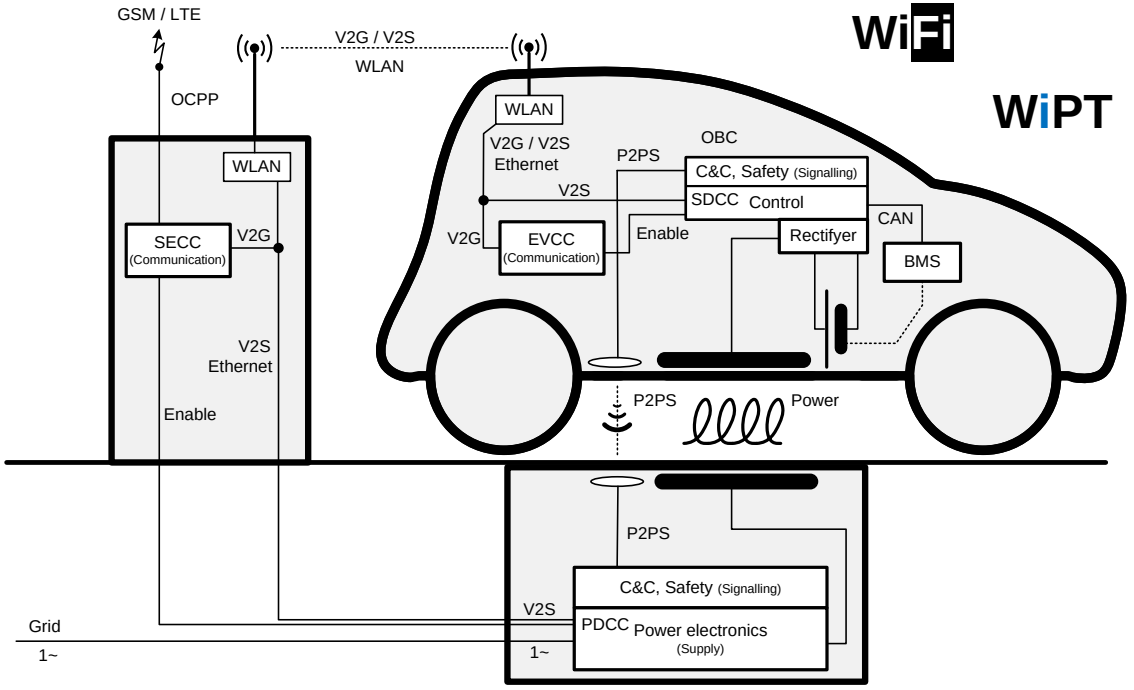


Physical components CCS

- PLC communication channel is replaced by WiFi
- Mains contactor is replaced by supply electronics enable signal
- Safety functions of CP are provided by near field signal

ISO 15118 stack

- SECC and EVCC are used as add on for high level functions
- Stack for AC charging can be used for wireless charging without changes
- Supplements for WiFi operation are necessary



Test of CAN bus as physical communication layer