

Institut f. Automation und Kommunikation e.V. Magdeburg, Germany

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Domicile in Magdeburg

About the institute

- ❑ Institute for applied and scientific research
- ❑ 61 employees, about 35 students and guest researchers
- ❑ about 90 national and trans-national research and development projects each year

Expertise and Skills

Fields of activity

- IT & automation
- Integrated communication
- Intelligent transport systems
- Mechatronics (e.g. contactless inductive power transmission)

Work

- Scientific research
- Hard- and software development
- Technical studies
- Consulting

Topics

- ❑ 3. Strategic research on technical dimensions of the recharging systems
- ❑ 4. Testing, trials and normative standards
- ❑ 5. Technology based Innovation

Project Idea: Models and Methods for the Evaluation and the Optimal Application of Battery Charging and Changing Technologies for Electric Busses

Motivation

- ❑ Public transport companies are forced to convert their diesel busses into electric busses in the future
- ❑ Investment costs will be very high
- ❑ Available battery charging or changing technologies have to be evaluated to be suitable for a public transport company

Objectives and Deliverables

- ❑ Development of models for battery charging and changing technologies, public transport network, timetable, bus routes, power consumption of busses etc.
- ❑ Development of methods to answer questions like: How many battery charging or changing facilities are required? Where do they have to be located?
- ❑ Development of a software tool to compare the different available technologies to each other for concrete public transport networks and timetables

Partnership

Existing

- Fraunhofer-Institute for Material Flow and Logistics (research institute)
- Magdeburger Verkehrsbetriebe GmbH (public transport company)

Required

- Public transport company
- Manufacturer of electric busses
- Public transport planning software company
- Coordination organisation