



Slide In

Development of Conductive Continuous Charging System for On Road Vehicles

Project Goal

- To support the development of a conductive electric road with power system load studies via traffic flow modelling power system modelling.
- The main goal of the traffic simulation is to properly reflect how the ERS loads the power system. This load needs to have realistic correlations in time and space along the road.



Project Scope

- Traffic flow modelling on selected highways
- Electric Power System modelling
- System simulation with respect to voltage, power and cable and transformer temperatures

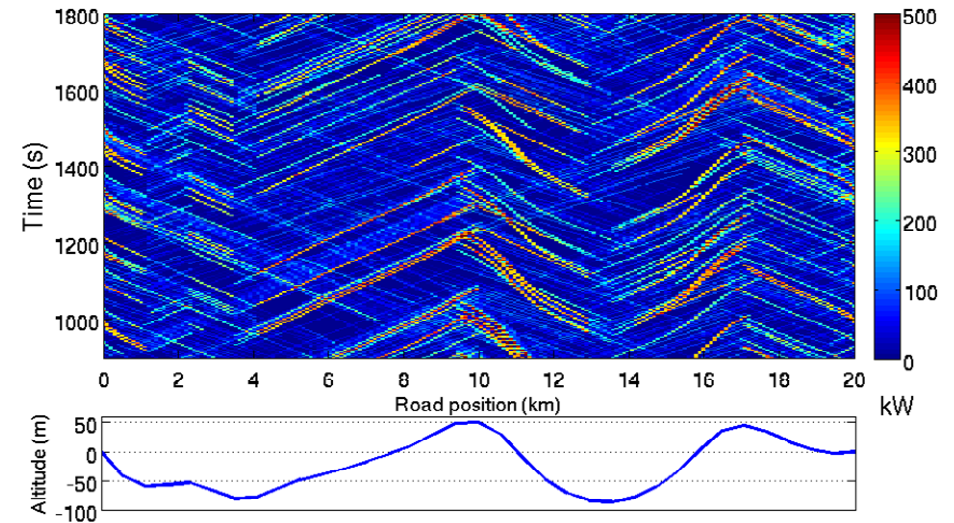


Figure 1 The power consumption per segment as a function of time and position along the road. The road is divided into 100 m sections that include the right lane of both travel directions.

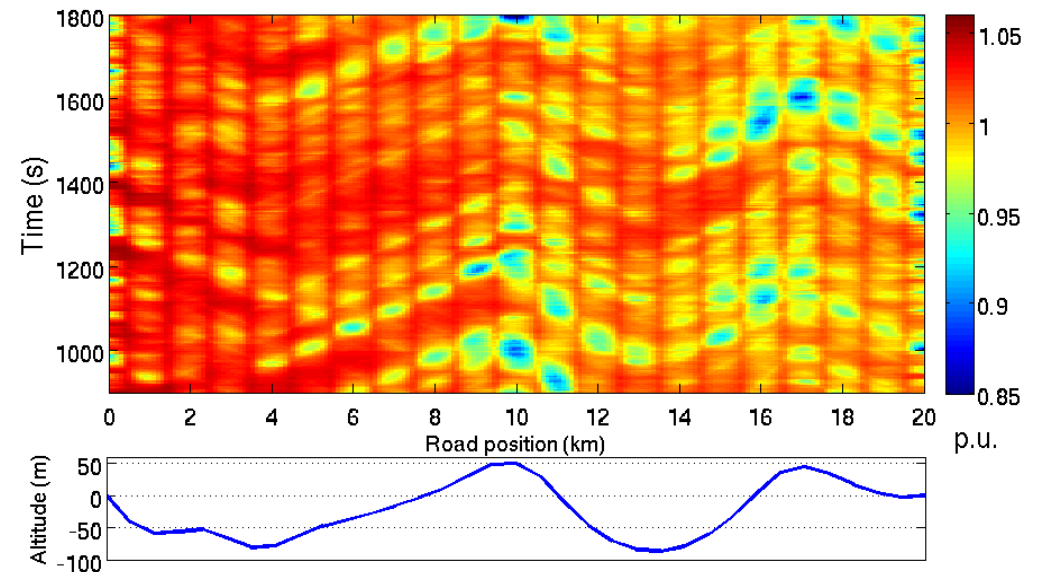


Figure 1 The voltage in the low voltage system along the road over time in per unit. The position of the feeding transformers can clearly be seen. The lowest voltage is 0.81 p.u. The 99 % percentile of the voltages is 0.93 p.u.

Partners, Resources & Timeframe

- **Partners**

- AB Volvo, Scania CV, Alstom Power, Bombardier transportation
- Victoria Institute
- ...

- **Resources**

- Power Systems lab @ Lund University
- Test Vehicle and Test Track @ AB Volvo
- ...

- **Timeframe:**

- Start: October 2010
- Finish: November 2013

Contact Information ...

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More material:

- **Reports**

- <https://www.viktoria.se/sites/default/files/pub/www.viktoria.se/upload/publications/slide-in-inductive-project-report-draft-phase-1-2013-10-18.pdf>
- <https://www.viktoria.se/publications/Slide-in-ERS-Inductive-project-report>