Czech Technical University in Prague
Faculty of Electrical Engineering

Department of Cybernetics

BACHELOR PROJECT ASSIGNMENT

Student: Ondřej B o r o v e c

Study programme: Open Informatics

Specialisation: Computer and Information Science

Title of Bachelor Project: Cooperative Formations on Highway

Guidelines:

1. Research related work in platooning and formations on highway.
2. Design a set of scenarios in which a deliberative, cooperative formation keeping can be beneficial.
3. Propose a concept of the cooperative formation keeping mechanism.
4. Evaluate proposed concept in a simulation.

Bibliography/Sources:

[1] Russell, S., & Norvig, P. (2010). Artificial Intelligence: A Modern Approach (p. 1132). doi:10.1017/S0269888900007724

[2] Vokrinek, J., Janovsky, P., Faigl, J., Benda, P., Tango, F., & Pinotti, D. (2013, July). A cooperative driver model for traffic simulations. In Industrial Informatics (INDIN), 2013 11th IEEE International Conference on (pp. 756-761). IEEE.

[3] Fernandes, P., & Nunes, U. (2010, September). Platooning of autonomous vehicles with intervehicle communications in SUMO traffic simulator. In Intelligent Transportation Systems (ITSC), 2010 13th International IEEE Conference on (pp. 1313-1318). IEEE.

Bachelor Project Supervisor: Ing. Martin Schaefer

Valid until: the end of the summer semester of academic year 2015/2016

L.S.

doc. Dr. Ing. Jan Kybic
Head of Department

prof. Ing. Pavel Ripka, CSc.
Dean

Prague, January 14, 2015