



Comenius University in Bratislava
Faculty of Mathematics, Physics and Informatics

THESIS ASSIGNMENT

Name and Surname: Bc. František Hajnovič
Study programme: Computer Science (Single degree study, master II. deg., full time form)
Field of Study: 9.2.1. Computer Science, Informatics
Type of Thesis: Diploma Thesis
Language of Thesis: English
Secondary language: Slovak

Title: Distance oracles for timetable graphs

Aim: The aim of the thesis is to explore the applicability of results about distance oracles to timetable graphs. It is known that for general graphs no efficient distance oracles exist, however, they can be constructed for many classes of graphs. Graphs defined by timetables of regular transport carriers form a specific class which it is not known to admit efficient distance oracles. The thesis should investigate to which extent the known desirable properties (e.g. small highway dimension) are present in these graphs, and/or identify new ones. Analytical study of graph operations and/or experimental verification on real data form two possible approaches to the topic.

Supervisor: doc. RNDr. Rastislav Kráľovič, PhD.
Department: FMFI.KI - Department of Computer Science
Vedúci katedry: doc. RNDr. Daniel Olejár, PhD.
Assigned: 08.11.2011

Approved: 15.11.2011
prof. RNDr. Branislav Rován, PhD.
Guarantor of Study Programme

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Student

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Supervisor