FACULTY OF INFORMATION TECHNOLOGY CTU IN PRAGUE

Review report of a final thesis

Student:	Berker Katipoglu
Reviewer:	Ing. Michal Valenta, Ph.D.
Thesis title:	Adapting the Conflict-based Search Algorithm for Alternative Objectives
Branch of the study:	Software Engineering

Date: 27. 1. 2020

Evaluation criterion:	*The evaluation scale: 1 to 4.*
1. Fulfilment of the assignment	***1 = assignment fulfilled,*** *2 = assignment fulfilled with minor objections,* *3 = assignment fulfilled with major objections,* *4 = assignment not fulfilled*

Criteria description:
Assess whether the submitted FT defines the objectives sufficiently and in line with the assignment; whether the objectives are formulated correctly and fulfilled sufficiently. In the comment, specify the points of the assignment that have not been met, assess the severity, impact, and, if appropriate, also the cause of the deficiencies. If the assignment differs substantially from the standards for the FT or if the student has developed the FT beyond the assignment, describe the way it got reflected on the quality of the assignment's fulfilment and the way it affected your final evaluation.

Comments:
The thesis fulfilled the requirements listed in the formal assignment. Even the assignment itself is not suitable for the thesis in specialization software engineering, but rather for theoretical informatics.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
2. Main written part	*70 (C)*

Criteria description:
Evaluate whether the extent of the FT is adequate to its content and scope: are all the parts of the FT contentful and necessary? Next, consider whether the submitted FT is actually correct – are there factual errors or inaccuracies? Evaluate the logical structure of the FT, the thematic flow between chapters and whether the text is comprehensible to the reader. Assess whether the formal notations in the FT are used correctly. Assess the typographic and language aspects of the FT, follow the Dean's Directive No. 26/2017, Art. 3. Evaluate whether the relevant sources are properly used, quoted and cited. Verify that all quotes are properly distinguished from the results achieved in the FT, thus, that the citation ethics has not been violated and that the citations are complete and in accordance with citation practices and standards. Finally, evaluate whether the software and other copyrighted works have been used in accordance with their license terms.

Comments:
The thesis is written rather as a scientific article than a software project. If the reader accepts this point of view, it is possible to state that the structure of the text is good and the text itself is well readable.
However, there are some formal failures in the text - for example missing sources in the labels of the figures 1.1 and 1.2. Similarly, it is not clear if the proofs of lemmas and theorems in the section 3.4 are done by the author or they are taken from the source [10].

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
3. Non-written part, attachments	*50 (E)*

Criteria description:
Depending on the nature of the FT, comment on the non-written part of the thesis. For example: SW work – the overall quality of the program. Is the technology used (from the development to deployment) suitable and adequate? HW – functional sample. Evaluate the technology and tools used. Research and experimental work – repeatability of the experiment.

Comments:
The solution is implemented in the Python language. It seems to be working, but there are no instructions on how to run it. Also, the documentation of the code itself is missing., at least the names of variables are intuitive and partially self-documenting There are some folders on the flash disk containing several input sets and several outputs in the form of figures and screenshots.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
4. Evaluation of results, publication outputs and awards	*70 (C)*

Criteria description:
Depending on the nature of the thesis, estimate whether the thesis results could be deployed in practice; alternatively, evaluate whether the results of the FT extend the already published/known results or whether they bring in completely new findings.

Comments:

I am not an expert on algorithms for multiagent path searching. But it seems to me, that the thesis brings original results and, probably, it may be published as a paper at a suitable conference.

Evaluation criterion:	*No evaluation scale.*

5. Questions for the defence

Criteria description:
Formulate questions that the student should answer during the Presentation and defence of the FT in front of the SFE Committee (use a bullet list).

Questions:

1. Can You refer more about software-related part of the thesis?

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
6. The overall evaluation	*60 (D)*

Criteria description:
Summarize which of the aspects of the FT affected your grading process the most. The overall grade does not need to be an arithmetic mean (or other value) calculated from the evaluation in the previous criteria. Generally, a well-fulfilled assignment is assessed by grade A.

Comments:

Even the thesis assignment is not much compliant with usual thesis topics in software engineering, which is not completely student fault, it deals with a non-trivial implementation and it brings original results, which, probably, maybe published later. This is the reason I recommend to accept the thesis to the defense, and in the case, that the presentation and the discussion will be focussed also to the software-related point of view, evaluate it as D (satisfactory).

Signature of the reviewer: