

Supervisor's statement of a final thesis

Czech Technical University in Prague

Faculty of Information Technology

Student: Martin Štrambach
Supervisor: doc. Ing. Miloslav Čapek, Ph.D.
Thesis title: Triangulation of planar objects and its implementation into the AToM package
Branch of the study: Computer Science

Date: 23. 5. 2017

<p><i>Evaluation criterion:</i></p> <p>1. Difficulty and other comments on the assignment</p> <p><i>Criteria description:</i> Characterize this final thesis in detail and its relationships to previous or current projects. Comment what is difficult about this thesis (in case of a more difficult thesis, you may overlook some shortcomings that you would not in case of an easy assignment, and on the contrary, with an easy assignment those shortcomings should be evaluated more strictly.)</p> <p><i>Comments:</i> Successful finalization of the thesis required: extensive review of literature, good theoretical background, significant modification of selected code, adding many new functionality and, importantly, support all features in the frame of project AToM (compatibility with advanced techniques like save/load in HDF, own error/stack system, dynamic workspace, etc.).</p>	<p><i>The evaluation scale: 1 to 5.</i></p> <p>1 = extremely challenging assignment, 2 = rather difficult assignment, 3 = assignment of average difficulty, 4 = easier, but still sufficient assignment, 5 = insufficient assignment</p>
<p><i>Evaluation criterion:</i></p> <p>2. Fulfilment of the assignment</p> <p><i>Criteria description:</i> Assess whether the thesis meets the assignment statement. In Comments indicate parts of the assignment that have not been fulfilled, completely or partially, or extensions of the thesis beyond the original assignment. If the assignment was not completely fulfilled, try to assess the importance, impact, and possibly also the reason of the insufficiencies.</p> <p><i>Comments:</i> As it is obvious from the final thesis, all points specified in the thesis' assignment have been fulfilled.</p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p>1 = assignment fulfilled, 2 = assignment fulfilled with minor objections, 3 = assignment fulfilled with major objections, 4 = assignment not fulfilled</p>
<p><i>Evaluation criterion:</i></p> <p>3. Size of the main written part</p> <p><i>Criteria description:</i> Evaluate the adequacy of the extent of the final thesis, considering its content and the size of the written part, i.e. that all parts of the thesis are rich on information and the text does not contain unnecessary parts.</p> <p><i>Comments:</i> Everything is explained, still thesis looks concise.</p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p>1 = meets the criteria, 2 = meets the criteria with minor objections, 3 = meets the criteria with major objections, 4 = does not meet the criteria</p>
<p><i>Evaluation criterion:</i></p> <p>4. Factual and logical level of the thesis</p> <p><i>Criteria description:</i> Assess whether the thesis is correct as to the facts or if there are factual errors and inaccuracies. Evaluate further the logical structure of the thesis, links among the chapters, and the comprehensibility of the text for a reader.</p> <p><i>Comments:</i> The thesis is well exposed, starting with general motivation, making review of literature and then specifying implementation details. Some tiny details regarding the mathematical nomenclature could be modified.</p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>92 (A)</p>
<p><i>Evaluation criterion:</i></p> <p>5. Formal level of the thesis</p> <p><i>Criteria description:</i> Assess the correctness of formalisms used in the thesis, the typographical and linguistic aspects, see Dean's Directive No. 14/2015, Article 3.</p> <p><i>Comments:</i> Thesis is written in LaTeX, all relevant figures are of vector nature and created in TikZ. Thesis is written in English.</p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>98 (A)</p>
<p><i>Evaluation criterion:</i></p> <p>6. Bibliography</p> <p><i>Criteria description:</i> Evaluate the student's activity in acquisition and use of studying materials in his thesis. Characterize the choice of the sources. Discuss whether the student used all relevant sources, or whether he tried to solve problems that were already solved. Verify that all elements taken from other sources are properly differentiated from his own results and contributions. Comment if there was a possible violation of the citation ethics and if the bibliographical references are complete and in compliance with citation standards.</p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>92 (A)</p>

Comments:

Bibliography is typed in BibTeX, all relevant sources are cited at proper places. However, I am not sure about standard which should be used in case of text written in English but at Czech Technical University... Anyway, I prefer different style (IEEE) than what is used :)

Evaluation criterion:

The evaluation scale: 0 to 100 points (grade A to F).

7. Evaluation of results, publication outputs and awards

95 (A)

Criteria description:

Comment on the achieved level of major results of the thesis and indicate whether the main results of the thesis extend published state-of-the-art results and/or bring completely new findings. Assess the quality and functionality of hardware or software solutions. Alternatively, evaluate whether the software or source code that was not created by the student himself was used in accordance with the license terms and copyright. Comment on possible publication output or awards related to the thesis.

Comments:

Except the code for thesis, Martin finished a lot of additional add-ons. He is full member of a team working on a project of Technology Agency for which he deliver important modul. His programming skills, but also his insight into GIT, LaTeX, Matlab and other fields were very helpful. Martin is already a co-author of conference paper for which he delivered important data.

Evaluation criterion:

No evaluation scale.

8. Applicability of the results

Criteria description:

Indicate the potential of using the results of the thesis in practice.

Comments:

The results will directly be used in academic software AToM.

Evaluation criterion:

The evaluation scale: 1 to 5.

9. Activity and self-reliance of the student

9a:

- 1 = excellent activity,**
- 2 = very good activity,
- 3 = average activity,
- 4 = weaker, but still sufficient activity,
- 5 = insufficient activity

9b:

- 1 = excellent self-reliance,**
- 2 = very good self-reliance,
- 3 = average self-reliance,
- 4 = weaker, but still sufficient self-reliance,
- 5 = insufficient self-reliance.

Criteria description:

Review student's activity while working on this final thesis, student's punctuality when meeting the deadlines and consulting continuously and also, student's preparedness for these consultations. Furthermore, review student's independency.

Comments:

Martin is active, emphatic and independent. We had meeting every week with Skype discussions in the meantime. It was joyful to participate on his thesis and to collaborate with him. His skills and personality predetermine him to continue working on challenging problems and projects. For example: he was able to learn many advanced programming techniques in Matlab (from OOP through unit-test framework up to the HDF format and how to use it) almost alone and in very short time.

Evaluation criterion:

The evaluation scale: 0 to 100 points (grade A to F).

10. The overall evaluation

95 (A)

Criteria description:

Summarize the parts of the thesis that had major impact on your evaluation. The overall evaluation **does not** have to be the arithmetic mean or any other formula with the values from the previous evaluation criteria 1 to 9.

Comments:

Thesis is nicely written and contains useful code which will be used in practice. Martin is already a co-author of publication related to this thesis. Consequently, I can truly say that the thesis is of excellent quality and Martin deserves to be awarded a grade A.

Signature of the supervisor: