

I. IDENTIFICATION DATA

Thesis title:	Rotation speed estimation from videos
Author's name:	Denis Gorbunov
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science
Thesis reviewer:	Jiri Matas
Reviewer's department:	Department of Cybernetics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>How demanding was the assigned project?</i>	
<p>The project is challenging in that it includes a creative part – the solution has to be novel since no visual based system for rotation speed estimation in general setting is available. I did not choose “extraordinarily challenging” since the solution could be based on an existing optic flow method, which simplified the solution significantly.</p> <p>The assignment is challenging from another point too: Denis had to learn about a broad range of problems, ranging from the physics of image formation, to various aspects of acquisition, not to mention to learn how to develop an Android application.</p>	

Fulfilment of assignment	fulfilled
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
The assignment has been fulfilled.	

Activity and independence when creating final thesis	A - excellent.
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
Denis worked diligently and independently. Whenever he had a problem or when he was not sure how to proceed, he immediately arranged a meeting.	

Technical level	B - very good.
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
<p>The thesis is technically sound. However, the method has been tested only on a limited number of objects and sequences. From the videos, it is clear that the optic flow method is the limiting component and that it limits the robustness and range of speeds where the rotation speed estimation is reliable. In addition, the method is currently not close to real-time, which is limiting its applicability.</p>	

Formal level and language level, scope of thesis	A - excellent.
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The thesis is organized well. The thesis is sufficiently extensive. Nevertheless, the text is very frugal, sometimes terse, as if there was a space limit.	

Selection of sources, citation correctness	A - excellent.
<i>Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?</i>	

The thesis is adequately referencing prior art and related work.

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

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III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Denis worked systematically and diligently. He fulfilled the assignment. The issues brought up in the "technical level" section are related more to the direct applicability of the result and are not a reason to lower the grade.

The grade that I award for the thesis is **A - excellent**.

Date: **16.6.2024**

Signature: