THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Fast Computation of Visibility Polygons**
Author's name:	**Bc. Jakub Rosol**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Cybernetics
Thesis reviewer:	Ing. Robert Pěnička Ph.D.
Reviewer's department:	Department of Cybernetics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	**challenging**
How demanding was the assigned project?	
I consider the assignment quite demanding given the requirement to implement several new methods with the intention of outperforming current state-of-the-art.	

Fulfilment of assignment	**fulfilled**
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.	
All the points of the assignment were fulfilled.	

Methodology	**correct**
Comment on the correctness of the approach and/or the solution methods.	
The methodology is correct for the given task. Student had obviously studied the relevant methods and based on them proposed new algorithms to create visibility polygons faster and for more scenarios.	

Technical level	**A - excellent.**
Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?	
The technical level of the thesis is great. I especially like how the student showed both the pseudocode and visual example of the otherwise quite difficult-to-understand polygon visibility methods.	

Formal and language level, scope of thesis	**A - excellent.**
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?	
Both the formal and language levels of the thesis are correct. Used math formalisms looks fine and the English language is easy to follow. The thesis is in overall well organized.	

Selection of sources, citation correctness	**B - very good.**
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 believe the referenced literature is adequate and the citations are correct. Student used a little less-standard citation from.	

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

Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.

In overall I believe that the presented diploma thesis is a great example of a solid work and rather scientific thesis with results presentable at top robotic conference venues.

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

Additional questions:
- Student claims that "a robot cannot decide where to go if it does not know where it is". I would like the student to comment on it and consider for example naïve approach of autonomous vacuum cleaners.
- It would be great to understand what the many times mentioned Polyanya library is and what part of it the student used.

Date: **24.1.2023**   Signature: