

OPPONENT'S ASSESSMENT ON DIPLOMA THESIS

Student's name and surname: Akhilesh Ashokkumar

Name of the diploma thesis: Creation of 3D models of objects using alternative applications

Supervisor of the thesis: Ing. Radomír Mendřický, Ph.D.

Opponent: Ing. Martin Frkal

1. Diploma thesis evaluation

Evaluation	excellent	excellent minus	very good	very good minus	good	failed
Meeting the goal and fulfilling task of the thesis		x				
Quality of conducted survey			x			
Methodology of solutions		x				
Expert level of the thesis			x			
Merit of the thesis and its potential applicability of results			x			
Formal and graphic level of the thesis				x		
Student's personal approach			x			

Mark x in the corresponding box.

Supervisor's final evaluation is based on his/her overall subjective evaluation.

Grading is stated literally in the article no. 5, neither by a number, nor by a letter.

2. Comments and remarks on diploma thesis:

Theoretical part of this begins with research of current 3D software for reconstructions, it's parameters comparison and same for available image sensors. Each software is then described in detail.

Practical part begins with procedure in GOM Inspect and scanning of nominal objects – lion statue and etalon. Most of the models are displayed, including colour map, which is also important to see deviations in various shapes.

Unfortunately the whole picture is a bit confusing. Conclusions in each chapter of practical part is stated before the research itself,. From graphical point of view there are different colours in graphs for same sensor, comparison seems to be very subjective. Also the amount of figures is too big.

In the conclusion student mentioned the iPhone sensor is number one, but looking at graphs (Fig. 43, 44, 45, 46) there is no significant difference from Nikon sensor.

3. Questions about diploma thesis:

- 1) Can you describe how the values of Sigma (table 6, pg. 55) and Alignment (table 8, pg. 57) are calculated?
- 2) Compare current graphs with Range value (Fig. 45 & Fig. 46 on pg. 58) with same graphs using Sigma value.
- 3) What is the difference between Three factor scaling and Single element transformation? What was the scaling factor used for each model?

4. Opponent's statement whether the diploma thesis meets the academic title requirements and whether it is recommended for defense: I recommend this work for defence

5. Opponent's grading: VERY GOOD

Date 14.06.2021, in Liberec

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Opponent's signature

