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Study programme: Technology in Transportation and Telecommunications

Study field: Professional Pilot

REPORT OF BACHELOR'S THESIS REVIEWER

Student: Yimimg Su

Thesis: Perception Issues during Black Hole Approach

Thesis assignment:

☑ Thesis does not violate CTU methodological instructions (link) ☑ Minimum report length is met (min. 35 pages)

☑ Thesis assignment fulfilled with each assignment point clearly addressed

	Bachelor's thesis evaluation criteria	Score
1.	**Formal and technical aspects. (0 – 30)** Evaluate meeting the thesis goal and overall quality of the report with respect to the assigned topic. Excellently addressed assignment evaluate with maximum points. Reduce evaluation proportionally to the extent of the assignment not being addressed properly.	21
2.	**Theoretical part and literature review. (0 – 30)** Evaluate the relevance of theoretical part with respect to the assignment, extent of the literature review and systematic presentation of the information. If directly copied information dominates (given no violation of citation ethics), reduce at least by 15 points. Another reason for reduction is insufficient choice and presentation of theoretical background, literature, and resources.	19
3.	**Extent of implementation works (SW, HW), application of knowledge, methodology appropriateness and thesis conclusion. (0 – 30)** A complex and flawless report suitable for publication receives total of 30 points. This aspect is evaluated in terms of contribution to the theoretical knowledge with practical implications. Especially positively perceived are created models, SW products, technical implementations and validated methodologies. Minor methodological flaws may reduce evaluation by maximum of 5 points. Methodological inconsistency with theoretical background, unclear or only partly adequate technical approach reduce evaluation by minimum of 15 points. Further reduction of evaluation can be due to insufficient discussion and conclusions.	20
4.	**Formal aspects and thesis structure (writing, text structure, graphs, figures, citations, references etc.). (0 – 10)** Evaluated are formal requirements with respect to the rules of writing and thesis attributes, i.e. text formatting, report structure, reference list, inclusion of graphs and tables, citation style. Violating individual requirements evaluate by reduction of 2 points for each violated aspect. Grammar errors, typos or inadequate stylistics or terminology leads to reduction of 2 to 4 points. The report shall include only standard and technical terminology (evaluate the capability to use technical terminology – 2 points), graphs follow standard rules (2 points) and, similar to tables, include legend and are clearly readable (2 points). ISO690 and ISO690-2 citation rules are obeyed (2 points).	4
5.	**Total score:**	64

Comments:

If more space is needed, attach to this report additional text on separate pages.

This theses describes black hole effect during night flying. Author did a significant number of measurements among the qualified people.

Theoretical part consists of detailed explanation of visual illusions including the accident analyses. It was compiled into the detail. This part was done in appropriate manner, but there were some statements, which were not correct, i.e. PAPIs are used even during precision approach - especially after minimums. Author does not fully understand the RNP approaches, LNAV approach does not provide glide path itself.

Methodology was correct, there were some minor discrepancies in the statements. Author realised the measurements during the approach into Karlovy Vary airport (LKKV) for runway 29. I would be more interested in technical parameters of the approach (platform altitude, airport elevation) rather than computer and graphic disc analyses which are explained into detail.

Results could have been explained into much more detail. The author only comments the results, I am missing more detailed conclusions which would be more than approapriate in this type of thesis, ecpecially in 25th and 75th percentile. Eye tracking data analyses are not explained as well, author divided participants into two groups, but he does not explain the rules. I see a large potential in this thesis, but author did not fully take the opportunity of this, i.e. scanning pattern during eye tracking analyses.

By reading this thesis it can be seen that the author is not a native speaker, which degrades this thesis pretty much. Many mistakes, wrong prepositions, incorrect using of tenses (and words however, ... even though etc.) Figure 11 is not approprate and should have been avoided or remade by author to be clear. Some of the pictures are missing some parts (Figure 10). Author is using different fonts during the thesis (Table of Contents, List of pictures).
This thesis is similar to Ing. Zbyšek Petřík´s master thesis - it was basically the same topic. It would be great, if the author could explain the main difference between these theses. However, author did quite difficult measurements on representive amount of people and he complied with all the requirements for bachellor thesis.

Overall thesis grading:

	A (excellent)	B (very good)	C (good)	D (satisfactory)	E (sufficient)	F (failed)
Score:	100 - 90	89 - 80	79 - 70	69 - 60	59 - 50	< 50
	☐	☐	☐	☒	☐	☐

Note: Please justify your evaluation with your comments above

Bachelor's thesis overall evaluation is D and I do recommend the thesis for defence.

Questions for the defense:

1. You divided your participants into two data groups. Describe the way how exactly you did it.
2. In your results graphs (Figures 23-25) are many outliers - values which should be excluded from your analysis. Explain why you included them in your thesis. Are the data presented in these figures by all the 52 participants or have you excluded any?
3. Your bachellor´s thesis is significantly similar with Master´s thesis of Ing. Zbyšek Petřík which I took part in. Have you co-operated during your measurements? Can you explain the difference between these two thesis?

Name: Ing. Michal Freigang

Organization: Time Air, s.r.o.

Signature: 

Date: 29. 08. 2022