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Study programme: Technology in Transportation and Telecommunications

Study field: Air Transport

REPORT OF BACHELOR'S THESIS REVIEWER

Student: Jiaxing Wang

Thesis: FRAM Analysis of Aircraft Accidents With Respect to Flight Procedures

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.	15
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.	15
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.	15
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:**	49

Comments:

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

Mr. Jiaxing Wang wrote his thesis on FRAM analysis of a few accident cases of Piper PA-44 aircraft. From my point of view, this topic is quite challenging, and I am afraid that I could not understand the student's approach to this topic. I, unfortunately, must grade the thesis "F". However, considering the above said I would let the student present his work, address the following comments and leave the committee to judge.

Maybe my English language knowledge level is insufficient, but I am afraid that student mismatches quite a number of aviation terminology. The first chapter, "Flight procedures in aviation" (I would name it instead "Phases of flight"), addresses an entirely different area than "Flight procedures" in the following chapters, so that part of the work is irrelevant. The text also contains parts that seem to be automatically translated to English and have no sense to a reader. The student does not discuss the results properly, and the whole Discussion chapter is rather the conclusion of the thesis. Students' findings are shallow; if consulted with a subject matter expert, they would be commented better, and FRAM models adjusted to be more relevant. Also, considering the aviation study field of the student, some technical terms such as "navigation AIDS (Airborne Integrated Data System)", "Flight plan of the airport", "transfer to alternate aerodrome", "turn on the engine" are misused.

Chapter 1.3 is a compilation of article abstracts and how it is cited is well on edge with citation ethics.

I further reduced my score on incorrect descriptions of figures, grammar, and stylistics.

These are points that would elevate the thesis on the appropriate university level:

1. Rewrite the theoretical part to be relevant.
2. Choose situations for analysis from which you may conclude something.
3. Consult your conclusions with SME.
4. Add citations correctly.
5. Send to proofreading.

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
						X

Note: Please justify your evaluation with your comments above

Bachelor's thesis overall evaluation is F and I do not recommend the thesis for defence.

Questions for the defense:

1. Why did you choose PA-44 aircraft and that particular five cases for analysis?
2. Did you use the whole Final reports of these cases or just fragments?
2. How do you understand the difference between "Discussion" and "Conclusion"?

Name: Roman Matyáš

Organization: Smartwings, a.s.

Signature:

Date: 29. 12. 2021