

## Review of Master's Thesis

**Student:** Pomikálek Jiří, Bc.  
**Title:** Agent Approach to Air Traffic Control (id 22732)  
**Reviewer:** Vlk Jan, Ing., DCGM FIT BUT

- 1. Assignment complexity** **more demanding assignment**  
The thesis assignment is quite challenging in my opinion since the Air Traffic Control (ATC) is very complex discipline. This task has never been performed automatically without human operators and creating reliable autonomous ATC system would be giant leap in this field.
- 2. Completeness of assignment requirements** **assignment fulfilled**  
The thesis assignment was fulfilled.
- 3. Length of technical report** **in usual extent**  
The thesis is written on 81 pages and it is in normal range recommended for a master thesis. Chapter 6 Testing and Evaluation could be extended in my opinion and it could contain more experiments for a system evaluation.
- 4. Presentation level of technical report** **85 p. (B)**  
The thesis is logically well structured and understandable for the reader.
- 5. Formal aspects of technical report** **80 p. (B)**  
I really appreciate that the student decided to write the thesis in English since it has the potential to address wider range of readers interested in discussed topic. I discovered only few grammar mistakes. The student should focus more on the correct word order in a sentence.
- 6. Literature usage** **83 p. (B)**  
The student cites sufficient amount of literature resources which are up to date and relevant to solved topic.
- 7. Implementation results** **90 p. (A)**  
The student created very complex simulation of ATC which is implemented using Belief-Desire-Intention (BDI) agent system. I appreciate that the student used a record of communication between the pilots and ATC which increased the simulation credibility in my opinion.
- 8. Utilizability of results**  
The implemented framework for ATC simulation could be used for pilot training and evaluation especially for practicing the communication between the pilot and ATC.
- 9. Questions for defence**  
How would you modify the air traffic simulation framework that it could be used for air traffic controller training.
- 10. Total assessment** **89 p. very good (B)**  
The implemented agent based ATC simulation has great potential in research of pilot training and evaluation. With respect to previous findings I suggest the grade **B**.

In Brno 29 June 2020

Vlk Jan, Ing.  
reviewer