

# Bachelor thesis review

**Thesis name:** Submarine Behaviour Model for Monte Carlo Simulations

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The student's task was to create a prototype of submarine behaviour which could be used to optimize surveillance asset allocation in anti-submarine warfare (ASW). The student had to study the domain of the ASW and extend his knowledge in the domain of planning algorithms. Both of these are quite complex, which qualifies the thesis as a very difficult.

The solution consists of design and implementation of modified versions of RRT\* algorithm suitable for this task. These algorithms were examined by experiments designed by student. As a part of the solution, student implemented GUI that serves as a proof of concept for the final user (navy intelligence operator).

Student approached the task with great effort and proactivity. He showed great dedication and excellent ability to work alone.

The problem and solutions are formalized using correct mathematical and algorithmic approach. The thesis is written in English language without any major grammatical errors. The total length (without appendices) is 63 pages. All bibliography is reference consistently.

Because of the reasons stated above I suggest to classify the thesis by grade **A – excellent**.

In Prague 13.6.2016

Ondrej Hrstka