

I. IDENTIFICATION DATA

Thesis name:	Sources of Transmission Localization by a Formation of Helicopters Equipped by a Rotating Directional Antenna
Author's name:	Václav Pritzl
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Cybernetics
Thesis reviewer:	Ing. Bc. Marek Neruda, Ph.D.
Reviewer's department:	Department of Telecommunication Engineering

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
The bachelor thesis includes the design and implementation of the application for localization of sources of transmission both in simulator and real experiments by micro aerial vehicles.	

Satisfaction of assignment	fulfilled
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
The assignment of the bachelor thesis was fulfilled in full.	

Method of conception	correct
<i>Assess that student has chosen correct approach or solution methods.</i>	
Student used several methods: simulation, real experiments, mathematical description for several parameters including error evaluation and comments of achieved results including further improvements. I would appreciate to include comparison of real world measurement with simulations, not only the simulations are only the step for real world measurement. Last point of assignment "to statistically compare" can be solved by any of statistical method, not only by comparison of absolute values (I guess they were not provided for omnidirectional antenna).	

Technical level	C - good.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
Student read the works that are related to the topic of the bachelor thesis and the information of these works used in his experiments. The data obtained from the experiments (simulation and real measurements) are commented on and the recommendation for further algorithm modifications is specified. The correctness of the use of radiation pattern for evaluation of uncertainty of angle measurement should be clear from the antenna theory. In the introduction, the term "RFID chip" should be replaced by "RFID tag" (RFID tag consists of RFID chip and antenna). The term "radiation pattern" should be used with accordance to the antenna theory (what it is, how it is measured). Obviously, student confuses the term "radiation pattern of the antenna" with dependence of RSSI on the angle.	

Formal and language level, scope of thesis	A - excellent.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
The thesis follows the template of bachelor thesis. Abbreviation should be in alphabetical order. English is in good level. I suppose the front side of the bachelor thesis should contain the word "thesis".	

Selection of sources, citation correctness	A - excellent.
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and</i>	

in accordance with citation convention and standards.

The thesis contains 34 citations, which follow citation convention. The sources are used to set the experiment parameters and compare with other approaches.

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

In introduction, the passive RFID tags are common in industry due to its price.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.

Student has studied the current state of knowledge, and used the data for his own experiments, both in simulator and in real experiments. Information from his work is well described and suggestions are presented.

How can you change the radiation pattern of the antenna?

I evaluate handed thesis with classification grade **B - very good**.

Date: **31.5.2018**

Signature: