

THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title: Hyperbolic positioning in UWB networks with non-transmitting tag

Author's name: Josef Krška Type of thesis: master

Faculty/Institute: Faculty of Electrical Engineering (FEE) **Department:** Department of Control Engineering

Thesis reviewer: Prof. Ing. Jan Holub, Ph.D. **Reviewer's department:** Department of Measurement

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment challenging

How demanding was the assigned project?

The assigned topic is definitely challenging and up-to-date.

Fulfilment of assignment fulfilled

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

The assigned tasks have been solved in full.

Methodology outstanding

Comment on the correctness of the approach and/or the solution methods.

The selected approaches and methods are appropriate.

Technical level A - excellent.

Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?

The thesis is definitely technically sound and well explained, including clear indication of the student contribution.

Formal and language level, scope of thesis

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

The thesis is organized in a logical way and written in excellent English.

Selection of sources, citation correctness

A - excellent.

A - excellent.

Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?

Sources are properly identified and cited appropriately.

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

The student's work is novel with potentially strong impact on the field. I recommend to publish the results in a suitable research journal.

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III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

The thesis submitted by Bc. Krška exceeds the usual amount of work and presentation quality. I definitely suggest the highest possible grade. I propose the following questions for the discussion:

- -Why do "Anchor to Tag" mean errors deviate from the actual position in an opposite direction than "Tag to Anchor" in Fig 3.5 (page 47)? Identical positions are measured using the same hardware.
- -What are the computational requirements for the methods proposed in Chapter 4.4? Considering those requirements, discuss their applicability for low-power devices/nodes.

The grade that I award for the thesis is A - excellent.

Date: **25.5.2021** Signature: