

Attachment to the form Record of the Final state examination

Mendel University in Brno, Faculty of Forestry and Wood Technology

DIPLOMA THESIS EVALUATION

Programme of study: European Forestry

Field of study: European Forestry

Academic year: 2015/16

Thesis title: Calculation of forest stand heights on the basis of airborne laser scanning on the territory of Training Forest Enterprise Křtiny

Thesis author: Bc. Andrea Procházková

Thesis supervisor: Ing. Tomáš Mikita, Ph.D

Thesis opposer: Ing. Antonín Kusbach, Ph.D

	Criteria	Grading						Cannot be evaluated
		A	B	C	D	E	F	
1	Meeting specification requirements	X						
2	Thesis topicality and professional level		X					
3	Utilisation of knowledge gained from study		X					
4	Utilisation of research literature			X				
5	Pertinence of the elaboration methodology		X					
6	Utilisation of result processing methods			X				
7	Interpretation of discussion conclusions		X					
8	Thesis formal layout		X					
9	Author's approach to the task handling	X						

Evaluation to be marked with **X**

Specific comments and questions to the thesis:

The goal of the thesis was set up clearly and properly.

The thesis written in English makes a good potential for potential publication in English written journals.

- Why are not citations of literature in the section Introduction?
- 3.1.3 Practical utilization of ALS in forest stand inventory: according to me, there is unnecessary description of national inventories
- 4.2 Stand height: more literature sources would be beneficial.
- Who performed scanning "between 17th and 18th of September 2014"? It is an important information!
- What is acceptable value of the Root-mean-square error (RMSE), I did not find a note anywhere.
- 5.4.1.2 Comparison with data from Forest Management Plan: some information repeat, e.g. 60% tree composition
- 6.1 Comparison with data from field survey: the first paragraph is the repetition of methods Fig 14, 15 and Tab 11 not mentioned in the text.
- 7.1 Discussion on individual tree detection from ALS: the first paragraph is the repetition of methods. There are many issues to solve here, probably...
- 7.2 Discussion on results from comparison ALS data with data from field survey: in the tab 16, there is not comparison of heights but comparison of height differences. Issues with broadleaves measurement reduced to the bare statement, not more.
- 7.3 Discussion on results from comparison ALS data with data from Forest Management Plan: The title of the Fig. 18 should be more descriptive, being not a specialist, I would have a hard time to understand.
- In the list of literature, there is two times: PATOČKA, Z. (2012). Využití dat leteckého laserového skenování v lesnictví. Bakalářská práce. LDF MENDELU.
- English grammar was not evaluated

The results of the thesis are not consistent with literature. This inconsistency was discussed but it does not satisfy me. The author stated that the method is promising, therefore just saying that the measurement of broadleaved trees that are dominant in the study area is difficult, is not enough. Additionally, the two year difference in the field measurement and laser scanning should not have such a fatal influence on height differences. Those issues should be already predicted before, and some technical adjustments should be set up awaiting such troubles.

Question:

Would it be possible to correct somehow the technical solution in methods with a goal to decrease the average difference?

Conclusion: The final thesis is recommended / ~~is not recommended~~
for defence*

*Cross out the inappropriate

Proposed final classification of the thesis*:

A	(B)	C	D	E	F
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*Circle or put the proposal in brackets, e.g. (A)

Date 5. 5. 2016

Signature (thesis supervisor/opposer)*

*Cross out/delete the inappropriate