



Bachelor thesis opponent's review

Bachelor thesis: Acoustic Events Detection

Author: Aslanov Jamal

Thesis supervisor: Ing. Jakub Svatoš, Ph.D.

Thesis opponent: Ing. Michal Toula

Rating (1 – 5)
(1 = best; 5 = worst):

| | |
|--|--------------------------------|
| 1. Fulfillment of assignment requirements: | <input type="text" value="1"/> |
| 2. Systematic solutions of individual tasks: | <input type="text" value="1"/> |
| 3. Ability to apply knowledge and to use literature: | <input type="text" value="1"/> |
| 4. Thesis formal and language level: | <input type="text" value="2"/> |
| 5. Thesis readability and structuring: | <input type="text" value="2"/> |
| 6. Thesis professional level: | <input type="text" value="1"/> |
| 7. Conclusions and their formulation: | <input type="text" value="1"/> |
| 8. Final mark evaluation (A, B, C, D, E, F): | <input type="text" value="A"/> |

**verbal:
excellent**

Brief summary evaluation of the thesis (compulsory):

Student fulfilled the goal of the thesis. There are description of the gunshot detection and characteristic of the gunshots in first part. Following part is describing algorithms and transformation which are used on the detection of the gunshot. Last part is evaluating results of the detection on captured gunshot and non-gunshot signals and reliability of the detection using each method. All methods are implemented in Matlab. The thesis is written in adequate professional level just references to the literature are missing in the text, but are mentioned in figure titles only.

Questions:

1. Why student chose to use FFT instead of Wavelet transform?
2. Order of Low pass filter was chosen to 150 because higher order than 200 are causing delay in 'real time'. Can student describe why?
3. Most of the techniques are in frequency domain. What time domain techniques were used for detection?
4. Did student check preliminary results of the detection using MFCC for other parameter combination (frames, overlap time) except the chosen parameter combination?



Date:

Signature:



Notes:

- 1) The total thesis evaluation needn't be determined by the partial evaluations average.
- 2) The total evaluation (item 8) should be from the following scale:

| | | | | | |
|-----------|-----------|------|--------------|------------|--------------|
| excellent | very good | good | satisfactory | sufficient | insufficient |
| A | B | C | D | E | F |