Recommendation for the defense of Ph.D. thesis

Ph.D. candidate: **Petr Schwarz**
advisor: **Jan Černocký**

I am happy that Petr Schwarz has finished his thesis under my supervision, although "supervision" must be detailed a bit: significant part of his work was directed by Hynek Hermansky, advised and criticized by Lukáš Burget and others from the Speech@FIT group. During his thesis, he was coming with so many original ideas and suggestions that it was not always clear who was the supervisor.
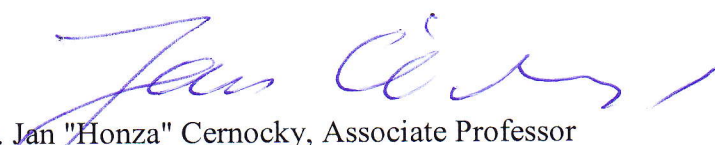
Petr's work aims at phoneme recognition but touches a variety of areas in speech, speaker and language recognition. Petr was able to develop original Hynek's ideas into a system that gives the world's best results on standard TIMIT database, is computationally feasible, and has attracted an interest of several academic and industrial partners, mainly after it was made publicly available from Speech@FIT's web pages.

The thesis actually documents only a part of Petr's activities. Although applying for PhD only now, he has been one of the Speech@FIT seniors for several years – he supervises students, participates in projects, and was an important person behind the success of our group in the several past NIST evaluations. Although not obvious from the thesis, Petr is also an excellent programmer capable of producing research systems, as well as coordinating our production software, which was already successfully used in several projects.

I think Petr is a prototype of an excellent researcher – able to grasp the necessary mathematics, develop new algorithms, program them and test carefully on data. The main thing however is that he never stops asking "WHY", and is never satisfied just with a bunch of numbers and conclusion "PER improves by 10%". I think this is well documented by his PhD thesis. From the personal point of view, I appreciate the sense of responsibility, fun and ability to help under any circumstances, it's really a blessing to have Petr in the group.

To conclude, I fully recommend Petr's Ph.D. thesis for the defense and I am looking forward to future work with him.

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