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Supervisor's opinion on the dissertation
Automatic Point-feature Label Placement
submitted by: Ing. Petr Bobák, Brno University of Technology, CZ
supervisor: doc. Ing. Martin Čadík, Ph.D., Brno University of Technology, CZ

Ing. Petr Bobák, in his dissertation titled "Automatic Point-feature Label Placement," addresses the issue of automatic label placement which is a central aspect of data visualization. In my opinion, this is a very current and challenging topic in contemporary data visualization research. The topic of automatic label placement was brought to our attention through practical applications of camera pose estimation methods, which we have been working on within the CPhoto@FIT research group since 2009.

I noticed Petr Bobák's diligence and talent during his engineering studies at FIT BUT. Petr joined our CPhoto@FIT research group in the fall of 2017. He began familiarizing himself with the topic of automatic label placement while simultaneously working in the commercial sector. Over time, Petr delved deeply into the issues of mathematical optimization, machine learning, and user experiments. From the beginning of his doctoral studies, Petr was very passionate about research. Nevertheless, as far as I can judge, he managed to balance his research efforts with his professional and personal life very well. Within the CPhoto@FIT research group, Petr was always willing to help his colleagues.

Among Petr Bobák's main research results are new methods for temporally coherent boundary label placement, which were published in the Computers and Graphics journal and presented at the CGI (Computer Graphics International) conference. The most significant result, in my opinion, is a new method for internal label placement, which is one of the first to use machine learning (specifically reinforcement learning) to increase label completeness. This result was published in the prestigious journal IEEE TVCG (Transactions on Visualization and Computer Graphics) and presented at the PacificVis conference.

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Working with Petr Bobák has been a pleasure for me, especially due to his professional approach, reliability, and diligence. It has been an honor to observe and contribute to Petr Bobák's development from a fresh engineer to a confident and successful young researcher. Given the above-mentioned facts, I am pleased to recommend Ing. Petr Bobák's work for defense.

Please contact me in case of any further questions.

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