FACULTY OF INFORMATION TECHNOLOGY CTU IN PRAGUE

Supervisor's statement of a final thesis

Student:	Petr Fiedler
Supervisor:	doc. Dr. André Sopczak
Thesis title:	Analysis of Data from a Network of Pixel Detectors
Branch of the study:	Web and Software Engineering

Date: 12. 6. 2018

Evaluation criterion:	The evaluation scale: 1 to 5.
1. Difficulty and other comments on the assignment	*1 = extremely challenging assignment,* ***2 = rather difficult assignment,*** *3 = assignment of average difficulty,* *4 = easier, but still sufficient assignment,* *5 = insufficient assignment*
Criteria description: *Characterize this final thesis in detail and its relationships to previous or current projects. Comment what is difficult about this thesis (in case of a more difficult thesis, you may overlook some shortcomings that you would not in case of an easy assignment, and on the contrary, with an easy assignment those shortcomings should be evaluated more strictly.)*	
Comments: The assignment is based on an a running project, and not on a testing situation, therefore the student encounters real-life challenges. And in fact new challenges were met during the execution of the project. In particular the implementation of the grid software on one server, and the script creation for checking the completeness of the data sets before transfer to the grid storage.	

Evaluation criterion:	The evaluation scale: 1 to 4.
2. Fulfilment of the assignment	***1 = assignment fulfilled,*** *2 = assignment fulfilled with minor objections,* *3 = assignment fulfilled with major objections,* *4 = assignment not fulfilled*
Criteria description: *Assess whether the thesis meets the assignment statement. In Comments indicate parts of the assignment that have not been fulfilled, completely or partially, or extensions of the thesis beyond the original assignment. If the assignment was not completely fulfilled, try to assess the importance, impact, and possibly also the reason of the insufficiencies.*	
Comments: The student addressed all aspects of the assignment. During the project he received also admin right temporarily for the installation of grid software on the server. The installed software is performing as expected.	

Evaluation criterion:	The evaluation scale: 1 to 4.
3. Size of the main written part	***1 = meets the criteria,*** *2 = meets the criteria with minor objections,* *3 = meets the criteria with major objections,* *4 = does not meet the criteria*
Criteria description: *Evaluate the adequacy of the extent of the final thesis, considering its content and the size of the written part, i.e. that all parts of the thesis are rich on information and the text does not contain unnecessary parts.*	
Comments: The size and detail of the main part of his thesis is adequate. All necessary information is given to understand the steps of his work, and the results are made clear.	

Evaluation criterion:	The evaluation scale: 0 to 100 points (grade A to F).
4. Factual and logical level of the thesis	*80 (B)*
Criteria description: *Assess whether the thesis is correct as to the facts or if there are factual errors and inaccuracies. Evaluate further the logical structure of the thesis, links among the chapters, and the comprehensibility of the text for a reader.*	
Comments: His thesis is well structures and is set up logically. It is easy to follow.	

Evaluation criterion:	The evaluation scale: 0 to 100 points (grade A to F).
5. Formal level of the thesis	*90 (A)*
Criteria description: *Assess the correctness of formalisms used in the thesis, the typographical and linguistic aspect s, see Dean's Directive No. 26/2017, Article 3.*	

Comments:
The thesis is very well written, several diagrams illustrate the contents explicitly. The student showed much initiative in the illustrations and visualizations.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
6. Bibliography	*80 (B)*

Criteria description:
Evaluate the student's activity in acquisition and use of studying materials in his thesis. Characterize the choice of the sources. Discuss whether the student used all relevant sources, or whether he tried to solve problems that were already solved. Verify that all elements taken from other sources are properly differentiated from his own results and contributions. Comment if there was a possible violation of the citation ethics and if the bibliographical references are complete and in compliance with citation standards.

Comments:
The bibliography is adequate, several relevant references are given.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
7. Evaluation of results, publication outputs and awards	*80 (B)*

Criteria description:
Comment on the achieved level of major results of the thesis and indicate whether the main results of the thesis extend published state-of-the-art results and/or bring completely new findings. Assess the quality and functionality of hardware or software solutions. Alternatively, evaluate whether the software or source code that was not created by the student himself was used in accordance with the license terms and copyright. Comment on possible publication output or awards related to the thesis.

Comments:
The results are as expected to the full satisfaction. No specific publication resulted yet, nor were awards received. His results will contribute to publications using the data from the grid storage. The obtained results are the basis for future analysis of the stored data and offers also the possibility to use the grid as source for computing, as the data is now directly accessible.

Evaluation criterion:	*No evaluation scale.*
8. Applicability of the results	

Criteria description:
Indicate the potential of using the results of the thesis in practice.

Comments:
The application of the results are clear. In the future the data stored on the grid using the developed structure during the project, as described in the thesis, is well suited for using grid-based data processing in the future. For example the luminosity analysis with the recorded data, currently analysed on a small cluster can be transferred to an analysis framework executed using the grid infrastructure.

Evaluation criterion:	*The evaluation scale: 1 to 5.*
9. Activity and self-reliance of the student	*9a:* *1 = excellent activity,* ***2 = very good activity,*** *3 = average activity,* *4 = weaker, but still sufficient activity,* *5 = insufficient activity* *9b:* *1 = excellent self-reliance,* ***2 = very good self-reliance,*** *3 = average self-reliance,* *4 = weaker, but still sufficient self-reliance,* *5 = insufficient self-reliance.*

Criteria description:
Review student's activity while working on this final thesis, student's punctuality when meeting the deadlines and consulting continuously and also, student's preparedness for these consultations. Furthermore, review student's independency.

Comments:
The activity by the student can be described as focused, making constant progress, and self-motivated to overcome arising challenges.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
10. The overall evaluation	*85 (B)*

Criteria description:
Summarize the parts of the thesis that had major impact on your evaluation. The overall evaluation **does not** have to be the arithmetic mean or any other formula with the values from the previous evaluation criteria 1 to 9.

Comments:
Overall, the student performed very well. He understood quickly the assigned tasks. He attended regularly the weekly group meetings at the Institute and reported on progress. Petr showed also very good skills to address arising problems. He was entrusted root privileges for time he installed grid software on the local server, and installed the software as required. He has been very motivated to advance the project and succeeded to complete the assigned task efficiently.

The description of the performed work is very clear, The goals of the assignment are achieved and the thesis details the results of his project. The diagrams and tables in the thesis are very useful. The thesis is well structured and easy to follow.

In solving arising challenges during the thesis the student showed a high level of self-motivation.

He also consulted relevant literature and used the information during this project.

The practical application of his thesis results are two-fold, on the one hand the developed scripts are useful in the future to transfer the collected data by the TPX detectors to the grid for sharing world-wide to the colleagues and collaborating group having the required access rights. On the other hand, the implemented software on the local server allows the transfer of the data also in the future. Furthermore, Petr transferred the existing data to the grid which is more than a proof of principle,

It has been a pleasure having Petr as a team member during the time of his thesis work and he communicated well with the other group members and explained well his progress, and discussed the challenges.

Signature of the supervisor: