

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>CAN Bus Latency Test Automation for Continuous Testing and Evaluation</b>
<b>Author's name:</b>	<b>Matěj Vasilevski</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	Department of Measurement – K13138
<b>Thesis reviewer:</b>	Ing. Pavel Píša, Ph.D.
<b>Reviewer's department:</b>	Department of Control Engineering – K13135

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>challenging</b>
<i>How demanding was the assigned project?</i>	
The project required to study results of work of many preceding students and colleagues as well as understand Linux kernel internals and communicate with core CAN subsystem developers to implement code according to written and consuetudinary rules.	

<b>Fulfilment of assignment</b>	<b>fulfilled with minor objections</b>
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
The core task to update XCAN drivers patches and extend CTU CAN FD driver with time-stamping have been achieved. Same for update of CAN benchmark utilities. The web side update and testing did not fit in the student's schedule. On the other hand, he has built together with Jan Charvát setup to test other student's work on ESP32C3 CAN/TWAI driver which required to add new mode to latency tester for target with single interface only. Lot of work and time has been invested to tune benchmarking system throughput etc.	

<b>Activity and independence when creating final thesis</b>	<b>A - excellent.</b>
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
The student was open to discussion and suggestions coming from community experts. His pace to familiarize with complex tasks and systems has been fast and need minimal or none help in areas which should each student with engineer diploma in area of computer science and or computer based control have. Cooperation and implementation of new operation mode of the tester has been done by students under their full design and architect role lead as well.	

<b>Technical level</b>	<b>A - excellent.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
The code has been tuned into shape acceptable for mainline. The community review and general changes ACK is valuable mark of quality and it is not easy to pick flower.	

<b>Formal level and language level, scope of thesis</b>	<b>B - very good.</b>
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The actual work has been started at right time and time has been invested into project continuously on the other hand some parts of the final text has been written and available for review relatively late.	

## Selection of sources, citation correctness

**A - excellent.**

*Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?*

The related sources are references and work provides valuable and years missing documentation for many project components.

## III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

The thesis result is functional software. Actual CTU CAN FD IP core driver has been accepted into Linux kernel mainline already during thesis submission. It would be even possible to propose inclusion of student's work into mainline 5.19 merge window. The code and RFC review response to CTU CAN FD time-stamping patch would probably allow that but that way it would block some possible changes in the IP core register map which has appeared beneficial as result of the project discussion. I expect that inclusion in 5.20 merge window is highly probable.

XCAN time-stamping has been updated but not submitted for community comments. It is possible in future, but there will be some lost of momentum when student actively working on the project proceeds forward to his future professional career where I believe on base of his work and cooperation, that he will be valuable member of each solid team.

The grade that I award for the thesis is B - very good.

Date: **6.6.2022**

Signature: