

I. IDENTIFICATION DATA

Thesis name:	Functional Specification for a Driver's Cab Simulator with ETCS
Author's name:	Lukáš Petřík
Type of thesis :	master
Faculty/Institute:	Faculty of Transportation Sciences (FTS)
Department:	Department of Transport Telematics
Thesis reviewer:	Radek Dobiáš Ph.D. MBA
Reviewer's department:	CTU FIT Department of Digital Design / AZD Praha s.r.o.

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	extraordinarily challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
Subject of this thesis is exceptionally wide. I would recommend to narrow it, e.g. to aspect of ETCS, which is itself quite wide subject.	

Satisfaction of assignment	fulfilled with minor objections
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
Conditions for the simulator are analysed. Relevant request for ETCS are analysed. Functional requirements are proposed, but I would expect them in form better to use them during design phase. Architecture should be described precisely.	

Method of conception	partially applicable
<i>Assess that student has chosen correct approach or solution methods.</i>	
The purpose of proposed simulator should be defined more precisely. Some aspects of the simulator are defined later in the thesis, like on the beginning of chapter 4 or in chapter 5.2 and 2.3. I would prefer these aspects described on the beginning of the thesis. In my opinion, ETCS L3 should not be excluded because, there is big potential in ETCS L3 applications on regional railways and lot of research need to be done in this field.	
On the other side, it should be emphasized that the student has worked on such a complex topic.	

Technical level	B - very good.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
Student with given the scale of the assignment had become familiar with a wide range of scientific literature; he staged ETCS specifications and met with UIC leaflets and other supporting documents. I found just minor inaccuracies, such as information that MIREL is an extension of LS06. LS06 is a product name for similar product of another manufacturer.	

Formal and language level, scope of thesis	C - good.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
Extend of the work corresponds to the required range defined in the assignment. Figures and tables should be numbered. Structuring each item bibliography does not exactly match the standard ISO 690, for example, is missing ISBN for books, or the designation "thesis" cited in the thesis.	

Selection of sources, citation correctness	C - good.
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	
Personally, I would prefer if the student to better distinguish between his own thoughts and taken from the literature. Student uses sometimes author's plural form and sometimes first-person narrative for his own work.	

Figure in Section 4.1 is not explicitly marked as cited from UIC leaflet, but it seems to be a mistake, not an intention. Source of other Figures is shown, when cited.

It is also inconsistently (eg. in section 4.1) referred to the literature, e.g. UIC612 leaflet is sometimes referred as "based on [7]," sometimes as "specified by UIC612", sometimes both ways (which I consider to be ideal).

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

Students drew 95 flowcharts describing the behaviour of ETCS on-board according to a subset of 026, which is important for the SW design of the simulator. This heroic work is described quite briefly in the thesis.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.

I evaluate handed thesis with classification grade **C - good**.

Date: **13.1.2017**

Signature: