



Review report of a final thesis

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Thesis title: Tesla Model 3 Updated Internal Network Security Analysis
Branch / specialization: Computer Security and Information technology
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Evaluation criteria

1. Fulfillment of the assignment

- ▶ [1] assignment fulfilled
- [2] assignment fulfilled with minor objections
- [3] assignment fulfilled with major objections
- [4] assignment not fulfilled

In my opinion the assignment was fulfilled, with no objections.

2. Main written part 92 /100 (A)

I think I found small spelling mistakes, however I would not dare to comment a Czech piece of work when I am unable to write it myself at the same level of language quality, after 20 years of learning Czech. Otherwise, these mistakes have no impact on the quality of understanding the text itself.

3. Non-written part, attachments 92 /100 (A)

I think the experiments performed as part of finding and exploiting vulnerabilities were extremely interesting even in the absence of a major vulnerability discovery. This may be a comfortable result for the many owners of a Tesla Model 3.

4. Evaluation of results, publication outputs and awards 92 /100 (A)

I do not think that the results are publishable as a breakthrough discovery, however Tesla should receive a notification for the camera vulnerability and the opportunity to correct the problem.

The overall evaluation

95 /100 (A)

I think this bachelor thesis is excellent, almost at the level of an engineering work, well designed, prepared, executed and documented.

Questions for the defense

I have two questions: one more related and one less related to the work, more as an opinion or academic guess.

1. Is it possible currently to send to the internal display a fake video stream from the rear camera?
2. Personal opinion: what would happen if the internal data busses of the car are flooded with data (deprived of bandwidth)? Is this ever possible or the impact would be major?

Instructions

Fulfillment of the assignment

Assess whether the submitted FT defines the objectives sufficiently and in line with the assignment; whether the objectives are formulated correctly and fulfilled sufficiently. In the comment, specify the points of the assignment that have not been met, assess the severity, impact, and, if appropriate, also the cause of the deficiencies. If the assignment differs substantially from the standards for the FT or if the student has developed the FT beyond the assignment, describe the way it got reflected on the quality of the assignment's fulfilment and the way it affected your final evaluation.

Main written part

Evaluate whether the extent of the FT is adequate to its content and scope: are all the parts of the FT contentful and necessary? Next, consider whether the submitted FT is actually correct – are there factual errors or inaccuracies?

Evaluate the logical structure of the FT, the thematic flow between chapters and whether the text is comprehensible to the reader. Assess whether the formal notations in the FT are used correctly. Assess the typographic and language aspects of the FT, follow the Dean's Directive No. 52/2021, Art. 3.

Evaluate whether the relevant sources are properly used, quoted and cited. Verify that all quotes are properly distinguished from the results achieved in the FT, thus, that the citation ethics has not been violated and that the citations are complete and in accordance with citation practices and standards. Finally, evaluate whether the software and other copyrighted works have been used in accordance with their license terms.

Non-written part, attachments

Depending on the nature of the FT, comment on the non-written part of the thesis. For example: SW work – the overall quality of the program. Is the technology used (from the development to deployment) suitable and adequate? HW – functional sample. Evaluate the technology and tools used. Research and experimental work – repeatability of the experiment.

Evaluation of results, publication outputs and awards

Depending on the nature of the thesis, estimate whether the thesis results could be deployed in practice; alternatively, evaluate whether the results of the FT extend the already published/known results or whether they bring in completely new findings.

The overall evaluation

Summarize which of the aspects of the FT affected your grading process the most. The overall grade does not need to be an arithmetic mean (or other value) calculated from the evaluation in the previous criteria. Generally, a well-fulfilled assignment is assessed by grade A.