CTU CZECH TECHNICAL UNIVERSITY IN PRAGUE

THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title: User interface for a smart mouse pad designed to prevent carpal tunnel

syndrome

Author's name: Bc. Tomáš Trejdl

Type of thesis: master

Faculty/Institute: Faculty of Electrical Engineering (FEE)

Department: Department of Computer Graphics and Interaction

Thesis reviewer: Ing. Matěj Klíma

Reviewer's department: Department of Computer Science

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment challenging

I evaluate the thesis assignment as challenging as it combines performing usability experiments with designing and implementing a prototype and a repetitive evaluation of its quality with users.

Fulfilment of assignment

fulfilled

The author fulfilled all the requirements in the assignments.

The qualitative experiments with the users that evaluated the usability of the design and prototype of the mouse pad are properly discussed in Chapter 5. This chapter also introduces the design enhancements of the mouse pad and application that arise from the user experiments. As required in the assignment, the author follows the user-centered design described in the analysis.

Methodology correct

I don't have any objections to the selected methodology. The author used the correct approaches in the design of the experiment, in the selection of the technologies used for the implementation of the software, and even in the documentation of the results. I especially appreciate the incorporation of Nielsen's usability heuristics.

Technical level A - excellent.

The student explains in his thesis in sufficient detail all the steps he performed when creating the prototype of the mouse pad and the application. In the initial part of the thesis, he clarifies the motivation for creating a new system, outlines the research and design process, and describes some introductory user interviews. He also specifies the system use cases. On the other hand, he doesn't specify the exact functional and non-functional requirements of the system. The design of the hardware and software parts of the system is mentioned as well, followed by the implementation and evaluation by the users. Everything is summed up in the conclusion altogether with the future work.

However, I would welcome a more technical description of the selected architecture, design, and implementation of the software in the text of the thesis. On the other hand, it isn't mentioned in the thesis assignment.

Formal and language level, scope of thesis

A - excellent.

The scope of the thesis is sufficient. The thesis is well organized, well formatted, and follows the recommendations of how the final thesis should look. The text of the thesis doesn't contain spelling errors. The only objection I have is missing captions for some figures, e.g., in Sections 5.1.8 and 5.3.1.



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Selection of sources, citation correctness

B - very good.

The thesis contains a sufficient number of resources that are mostly in good format. However, sometimes I miss a citation of a resource, e.g., in the descriptions of the applications described in Section 3.2.1. Furthermore, the author used an infrequent way of citing the reference entries, made in most cases by an abbreviation of the authors' names, sometimes, it contains a year of the publication, and sometimes, it even contains a + sign when there are more authors. I personally would select a more formal way of referencing.

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

The author successfully created and performed experiments with real users to design and implement a usable mouse pad and a supportive application for the prevention of carpal tunnel syndrome. The performed activities and system components are documented in the thesis, which is very well readable.

I have only minor comments on the thesis, and I mention them in the paragraphs above.

The grade that I award for the thesis is A - excellent.

Date: **7.6.2023** Signature: