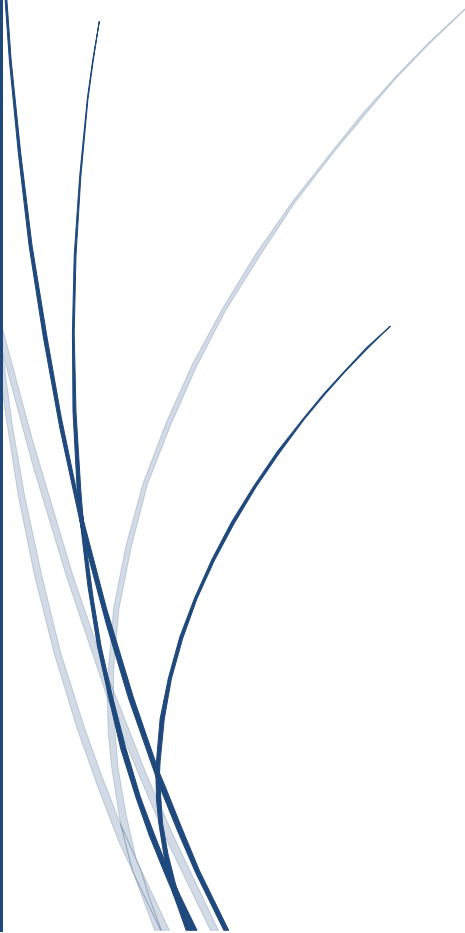07.05.2015

MEASURING THE USABILITY OF GIMP

Tuğba Özkal
Cem Yusuf Aydoğdu
Emre Can Agatay

Dear Dr. Duff:

We are submitting the attached report, which is entitled *Measuring The Usability of GIMP* on May 7, 2015.

Briefly, this report consists a combination of information about image manipulation tools usage among Internet users and analysis about usability of GIMP, comparing to other software. With the help of an online survey, we obtained useful information about user opinion about popular image manipulation tools. For the analysis, we compared GIMP with Photoshop in terms of usage easiness by measuring speed of completing some tasks.

We would like to give special thanks to everyone participated in our survey and our friends due to their contributions for task measurement experiments.

We hope you find this report satisfactory.

Sincerely yours,

Cem Yusuf Aydoğdu
Tuğba Özkal
Emre Can Agatay

Introduction

MEASURING THE USABILITY OF GIMP

Introduction

After having the results that GIMP is one of the most preferred and user friendly image manipulation tools from our first study, we conducted a second research on matter in order to reach a more precise conclusion and see the position of GIMP more obvious against its arch rival: Photoshop. In this experiment, we compared the times passed while participants were performing same set of tasks with both tool and observed that GIMP has slightly higher usability than Photoshop.

Methods

For the purpose of measuring usability of GIMP, we used two methods. Firstly, we conducted an online survey to quantify usage habits of users who use photo editing tools in different platforms. In the second method, we assigned a task list for users to complete in GIMP and Photoshop, then we measured the time passed to completion of these tasks.

Survey

In this method, participants are asked for some questions like which platform they use, which program they choose to manipulate images, rating they give to the program they use, what are their purpose to use a photo editor, how frequent they use these programs. 163 people attended to this survey. Results are examined in charts in results section.
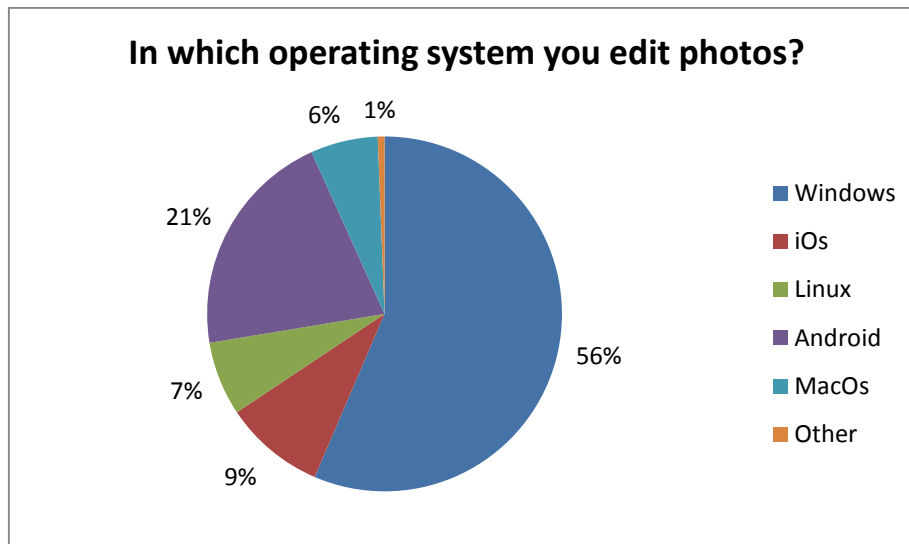
Tasks

In the second method, we assigned participants to execute some tasks by using tools and effects which are exist in both programs, GIMP and Photoshop. These tasks are opening a new file with dimensions 15x15 cm, opening an existing photograph in a new window, selecting and copying an arbitrary portion of the photograph to the initial blank file, resizing the combined image, applying "Wave" filter, adding a text, then finally saving and closing the file.
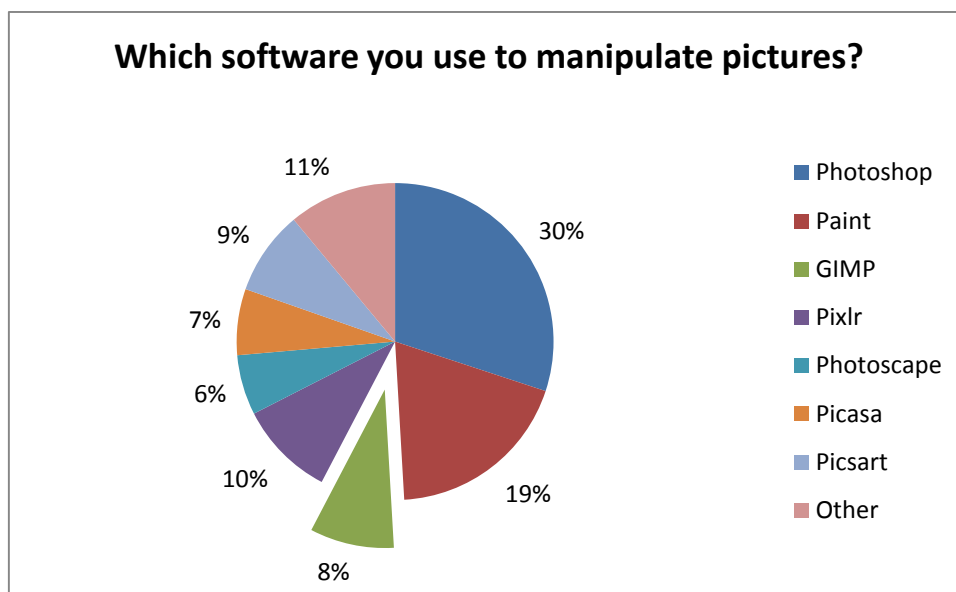
Results

Survey

First question in the survey is about the operating system. Results show that Windows is the most used operating system with 92 users, Android is in the second place with 34 users, and the iOs is third with 15 users.
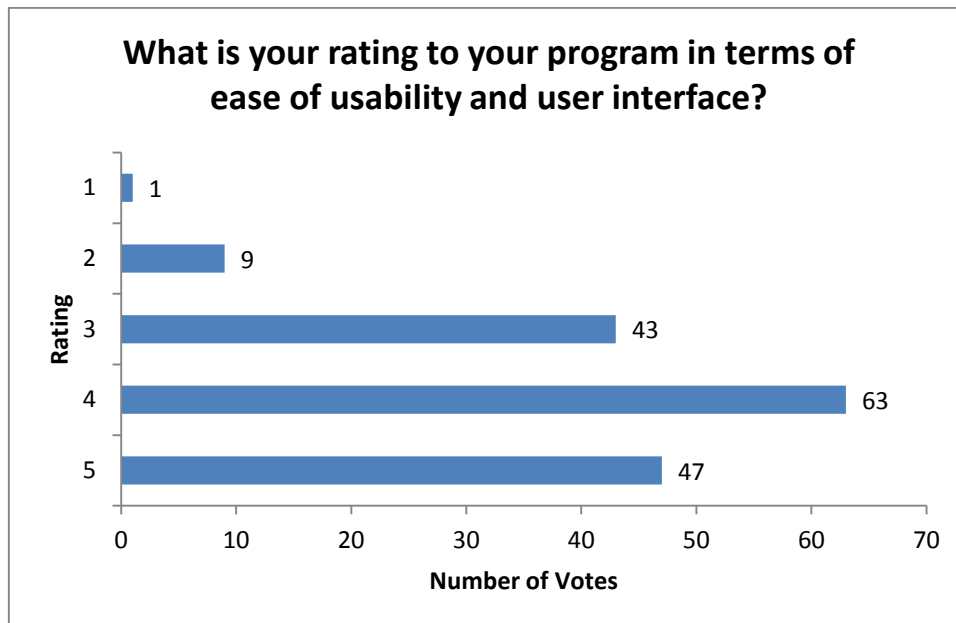
Figure 1: Preferred operating systems for image manipulation

In the second question, we asked users which software they use as a photo editor. Photoshop is the most used software with 30%, which represents 49 votes. Paint is second with 31 votes and GIMP is third with 14 votes.

Figure 2: Preferred manipulation tools

In the third question, participants are asked to rate the photo editing programs they use in terms of easiness of usability and user interface, from 1 as worst to 5 as best.

Figure 3: Chart of rating of usability

Next question is an open question which examines usage purpose of the program they use. According to most of the answers, participants are using these programs to manipulate basic properties of images, for instance adjusting shadows or lights, resizing or cropping photos, using effects and filters.

In the last question, we asked testers their usage frequency of these image manipulation tools. Over all 163 participants, 68 of them stated that they use several times a month, 53 of them are using several times a week and 27 of them are using several times a year.

Tasks

Task measurements are based on 4 participants. Results show that execution time of these task in GIMP is generally lower than Photoshop. Results are shown below in the chart.
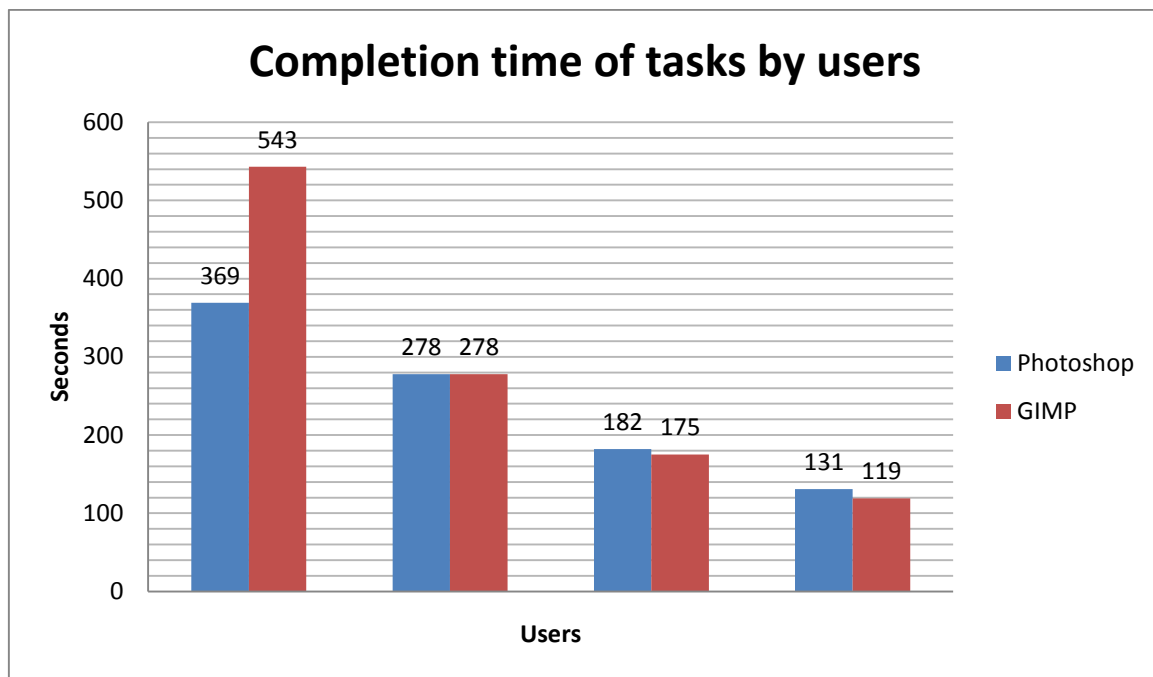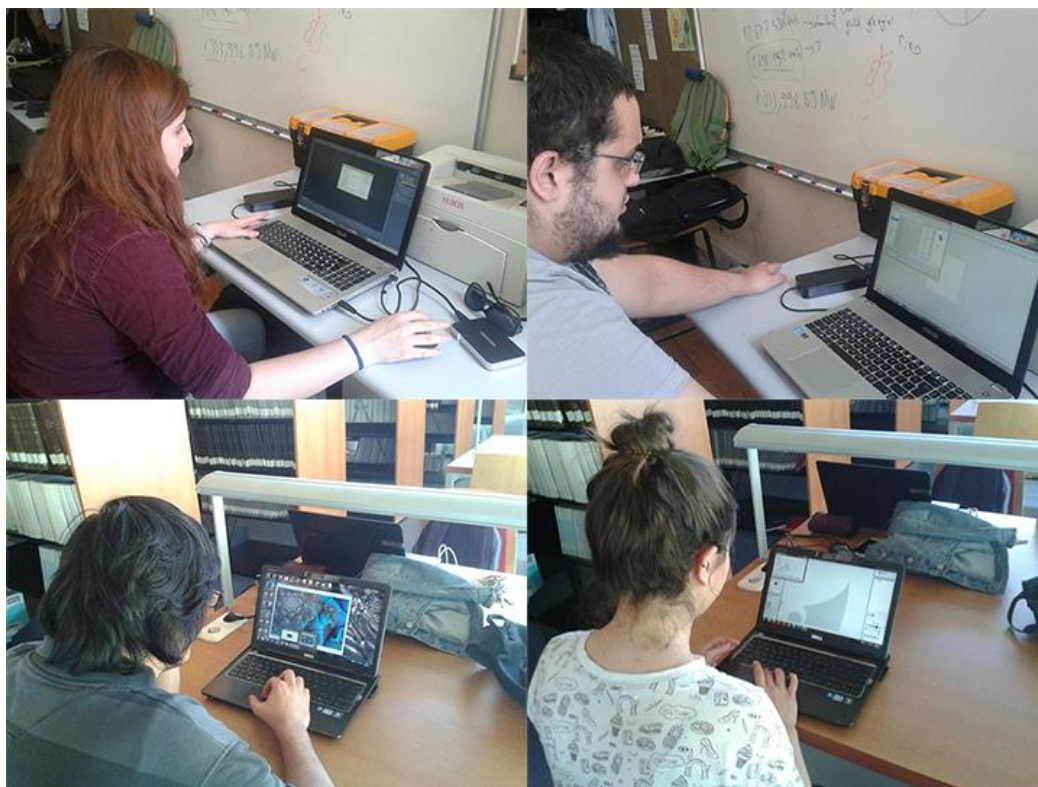
Figure 4: Completion time of tasks by users

Figure 5: Participants who use both GIMP and Photoshop to complete tasks

Analysis

According to result of comparing research, GIMP is more useful than Photoshop. Because, in general, time of completing targets in GIMP is shorter than Photoshop's. While the first participant completed targets in 369 seconds on Photoshop, she completed the same targets in 543 seconds on GIMP. The second participant completed the same targets in 278 seconds on Photoshop, and on GIMP, completing the same targets took 278 seconds of him too. The third participant completed the same targets in 182 seconds on Photoshop, on GIMP, she spends time 175 seconds. And the last participant completed the same works in 131 seconds, he consumed 119 seconds on GIMP to complete the same targets. The result show us that GIMP's usability is more than Photoshop's.

Conclusion

To sum up, there are many difference between survey and experiments. Result of survey shows us Photoshop using ratio is bigger than GIMP on separate platforms and people who uses Photoshop are more satisfied than who uses GIMP, but they spend shorter time for completing tasks on GIMP than Photoshop. It is clear that even necessity more time to complete works on Photoshop, users generally prefer to use Photoshop.