Git GUI Software Usability Survey

Victor Reginato
McMaster University
Hamilton, Ontario
reginavp@mcmaster.ca

Erica Cheyne
McMaster University
Hamilton, Ontario
cheyneem@mcmaster.ca

Don Pham
McMaster University
Hamilton, Ontario
phamd@mcmaster.ca

ABSTRACT

UPDATED—October 18, 2016. This sample paper describes the formatting requirements for SIGCHI conference proceedings, and offers recommendations on writing for the worldwide SIGCHI readership. Please review this document even if you have submitted to SIGCHI conferences before, as some format details have changed relative to previous years. Abstracts should be about 150 words and are required.

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous; See http://acm.org/about/class/1998/ for the full list of ACM classifiers. This section is required.

Author Keywords

Authors' choice; of terms; separated; by semicolons; include commas, within terms only; required.

git; gui.

INTRODUCTION

Git is a powerful version control system that is used by users of various skill levels. This survey will evaluate 4 different Graphical User Interfaces (GUIs) that help users manage their git repositories. Each piece of software will be examined and reviewed based on a few different metrics including: what features it affords the user (what functions it provides), how it signifies different affordances (how it shows the user what they are able to do), the constraints present in the application (things that the GUI prevents the user from doing), the feedback shown to the user when actions are performed and the overall discoverability of the GUI. The conceptual model is also something that will be discussed for each GUI; how it shows the underlaying conceptual model defined by git will be evaluated as well.

The four Git GUIs that will be reviewed in this survey are by different companies and have free versions available for public use. One client is GitHub, it is provided by Git Hub - a site that hosts git projects. Git Kraken a client made by axosoft

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COMMON USER GOALS

The average git user may not know about all the features afforded by git. Having said that, at a higher level, every git user has a few common goals. Someone using git wants their source control to be centralized. They want to be able to make changes to their code and have a centralized version of the code reflect those changes. They want to be able to see when changes to the code happened, and if they need to collaborate on a project, who made those changes. The user will need to be able to access the centralized copy of the code, and compare the centralized copy to their local copy. These high level goals can be broken down into git commands, the GUIs use git commands to achieve the user's goals. Depending on the GUI, it is explicit about the git commands that will be used and will allow the user to customize them.

GITHUB DESKTOP REVIEW

This section reviews GitHub desktop, the default GUI for managing git repositories. This application is produced by GitHub and can be downloaded and opened directly from their website. The affordance that most git users appreciate about GitHub desktop over other applications is the easy cloning ability. This interface does not allow for users to edit their code directly within the app, nor can you view the most recent version of the files. Instead you can see the initial files, and you can see the specific changes that you made to the files. In order to see the current file with all changes applied and to make changes to the file you must open those files in another program on your machine. This application does allow the user to see all changes that were made to a file, as well as who made those changes.

Stage, Commit and Push Changes to Remote

Being able to take changes made on the users machine and apply them to the remote repository is an essential element to managing a git repository. This is described for GitHub desktop in the HTA ***called this***. After a user has made a change to a file on their machine and has opened the GitHub desktop application, they must choose what repository they have made changes to. The repositories are found on the left hand side of the page and although there is no title signifying that these are the repositories, the filter repositories field is used as a signifier. The feedback the user receives after pressing the repository name is not immediate and could be frustrating depending on how long the repository takes to load.

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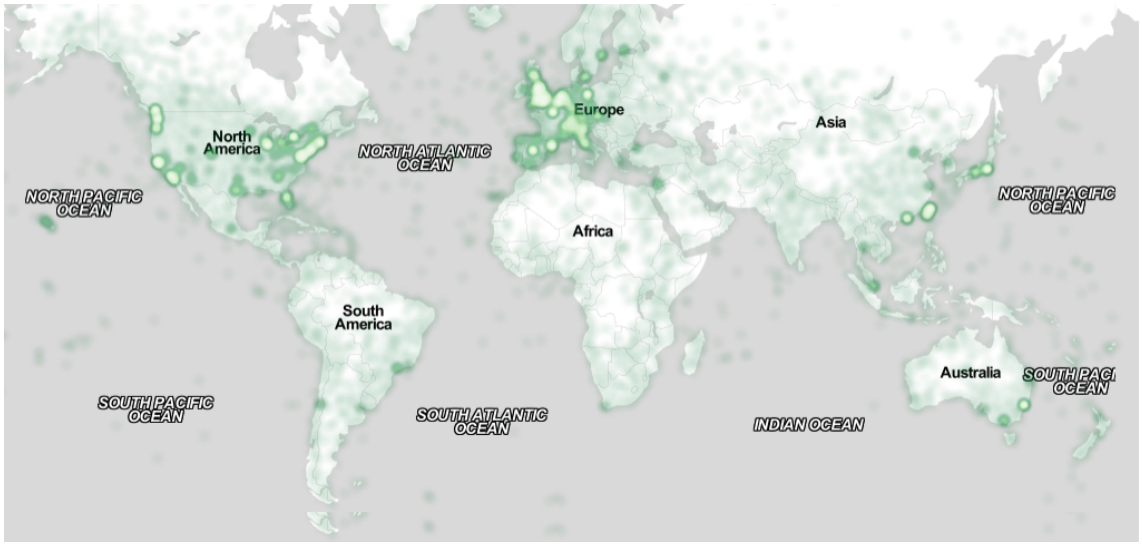

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ACKNOWLEDGMENTS

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