

FocusExtension: An Application to Increase Productivity and Streamline Work*

Within the Google Chrome Web Browser

Uday Talasila[†]

Department of Computer Science
Virginia Tech
Blacksburg, VA, USA
udayt@vt.edu

Thomas Powderly

Department of Computer Science
Virginia Tech
Blacksburg, VA, USA
tjpow23@vt.edu

Aaryaman Akhouri

Department of Computer Science
Virginia Tech
Blacksburg, VA, USA
aakhouri@vt.edu

Taylor Mannion[†]

Department of Computer Science
Virginia Tech
Blacksburg, VA, USA
taylorm21@vt.edu

ABSTRACT

Individuals utilize many different applications for productivity in the modern world that do not interface well and can lead to less streamlined work. This proposal presents a solution in the form of a single application to handle the interactions between all relevant extensions and applications to provide a seamless experience on the Chrome web browser.

INTRODUCTION

Within the current internet-driven world, there are many different applications that individuals utilize in order to get their work done. Mail, calendar, reminders, TODO lists, productivity tools such as Pomodoro timers, adblockers, and password managers, are all examples of the myriad different tools that we use as a part of our daily experience on the internet to make it more enjoyable and productive.

However, one issue that threatens to undo all of the productivity gains from using these different apps is switching and interfacing between all of them. Setting an event on your Calendar that doesn't synchronize to your Reminders can leave you out to dry when no notifications remind you of the event and it happens without you. Pomodoro timers that are interrupted by notifications that can break your focus. Needing to turn on and off multiple different extensions depending on the page you are on. It can all add up to becoming a significant hurdle to seamless, streamlined productivity.

At the current moment in time, there isn't a single consolidated solution like the one proposed. At most, the offerings will combine only one or two of the above applications into one platform, such as the ClickUp extension for Chrome, which combines mail and TODO lists (1). However, in order to achieve the productivity savings that are desired, one single place to access all of these tools is necessary. For example, a simple Google search will reveal that many of the lists of top Chrome

productivity tools will only address one single component of productivity. In the long run, trying to utilize all of these various different tools with different interfaces will only lead to less productivity, as more and more time is spent navigating them and less time is spent actually doing work and enjoying the benefits of said tools.

This proposal presents a potential solution to this problem of disunified productivity tools. By creating one single extension that can interface with all other productivity applications and extensions, this solution aims to consolidate all of the complicated productivity tools that individuals use into one streamlined application. For example, one could imagine one single extension that brings up a small window, with options to open a unified calendar/task/TODO application, and on/off buttons for each of the other extensions that an individual utilizes. One could even imagine a way to add any number of different applications to be controlled centrally through the main extension, rather than a pre-set list of them, to allow for the most possible flexibility. There are many different implementations for a concept like this, which will be coordinated as the project is more fully fleshed out and understood, but the overall goal will still assist greatly in the productivity of those in the Computer Science space and beyond.

RELATED WORK

As mentioned before, there are some already existing productivity tools available for the Chrome browser. One mentioned previously is the ClickUp extension. This extension combines some of the aforementioned productivity applications, such as task lists, emails, and timers (1). However, the scope and extent of the consolidation present in ClickUp is unsatisfactory for the desired outcomes of this proposal.

Most of the pre-existing productivity tools within Chrome only tackle individual issues/applications. However, this project should consider the most popular ones when designing an interface between different extensions, as being able to interact with the

most popular productivity extensions will allow the project to have the most impact on individuals and encourage widespread adoption. An example of key extensions to consider are UBlock Origin, a popular AdBlock software that functions on many sites including YouTube (2). Another example is Grammarly, a spelling and grammar checking application that many people utilize to ensure their writing is clean and professional (2). Along with those dedicated extensions, some other crucial applications are calendar applications like Google Calendar, and mail applications like Gmail, Outlook, and Yahoo Mail. These are all critical to include in any implementation of this project, and will be prioritized as such.

SOFTWARE ENGINEERING PROCESSES

For this project, the team will be utilizing the Incremental Model. The Incremental Model is an iterative software engineering process that consists of multiple different “waterfalls” of coding. These waterfalls consist of analysis, design, implementation, and finally testing and integration. The waterfall is then repeated as many times as is necessary with the code that has already been completed, in order to re-center the objectives and obstacles that the project is facing and overall be more adaptable and productive.

The reason that the team will be utilizing this process is because the requirements for this project are not known in great detail at the present moment, and will very likely continue to change and be revealed throughout the entire lifespan of the project. This could be due to multiple factors, such as different extensions being revealed, or issues with coding interfaces for/obtaining data from all of the different applications. Using the incremental model will allow the team to tackle new problems and objectives as they are discovered/arise throughout the semester. Additionally, this process will ensure that some form of completed product is always present, meaning that improvements will be constant until the project is complete, rather than a potentially having a fully incomplete product by the end of the timeframe.

REFERENCES

- [1] “The ClickUp Chrome Extension for Tasks, Time Tracking & Screenshots,” *Clickup.com*, 2024. <https://clickup.com/chrome-extension> (accessed Sep. 24, 2024).
- [2] A. Boulette, “The 15 best productivity extensions for Chrome in 2024,” *Zapier.com*, Oct. 27, 2022. <https://zapier.com/blog/productivity-extensions-for-chrome/?msockid=37c35c48beec61f81c334fd7bffe607a> (accessed Sep. 24, 2024).