Determined Mail: Your Everyday Email Sight

Group TBD

Identifying the Problem

The Problem:

Gmail's interface appears to lack consideration towards people with dyslexia and other sight/language-based disabilities.

Why is the Problem Important:

Email is the most important form of communication in the professional world now. Without email, it is nearly impossible to get a job and equally difficult to keep up in the workplace. However, those with sight/language based disabilities struggle with email. Because of the large amount of text on screen, with few visual aids, those with sight/language-based disabilities struggle to parse the information. Beyond the issues of reading the text itself, it is often difficult for those with dyslexia to keep their place on the page because of the packed format of gmail. It is estimated that 1 in 10 people have some form of dyslexia, meaning that these barriers affect a large segment of the population.

Identifying Users

Our Target Users

We aim to specifically help design our email service for people with dyslexia or people with other language / sight based disabilities.

Not our Target Users

We are not focused on people without issues reading large amounts of text. However, we hope that our email service will improve all users' experiences when utilizing email.

Why this User Group is Appropriate

This user group is appropriate because email services tend to neglect accessibility features for these groups of people in their design. We hope to resolve this issue by designing our service specifically with these users in mind.

User Personas

Jon, Promotor: has dyslexia. He is a current college student who receives many of his assignments through email. He is always very busy as he is taking 18 units, is in many clubs on campus, and he is TA. As a result, he is often checking his email on the go. He mostly uses his mobile phone to check his email, but he also carries a laptop with him most of the time, so he checks his email on both his phone and his laptop.

Daryl, Promotor: does not have dyslexia, but she does have a different sight disability (not officially diagnosed). She works full time as a lawyer at a corporate office. Thus, checking her email is extremely important. She is at her office 5 days a week, 8 hours a day, so she mostly checks her email on a desktop computer. However, sometimes she needs to keep up to date on whether or not there is anything urgent going on over the weekend. Daryl also has two young children, so she needs to be able to check her email quickly on the go when she is at home.

Carlie, Promotor: has dyslexia. She just began middle school, so she also just started using email since her teachers want them to communicate through email. Carlie is still learning how to go about using email. At Carlie's school, all of the students receive iPads that they can take home with them, so more often than not, Carlie is checking her email on an iPad.

Dr. Zink, Defender: is a professor in the Business school at Loyola Marymount University. He is also the director of the Honors Program at LMU. As a result, he is on his email almost all of the time. He does not have dyslexia or any sight / language based disability. However, Dr. Zink is often checking his email while on the go and in a hurry, thus he needs a more organized inbox.

Existing Solutions

Sans serif typefaces (e.g. Arial) are easier to read for those with dyslexia. There is a sans serif typeface called “OpenDyslexic” that also reduces the letter spacing and increases word spacing and increases readability for those with dyslexia.

There are apps that “speak your email” inbox. They will read your emails to you and are even able to detect and avoid cluttered areas of emails (ex: signatures) so that the email is read to you as it is meant to be read.

- One such app is called Speaking Email. This app does all that is listed above, but it also includes the ability to skip reading out emails with voice commands. You can action your email by voice command, such as flag, archive, trash, etc. It also allows you to compose emails that can be read back before sent. The speed of speaking can be changed at any time with a simple command of “faster” or “slower”.

Our Solution

We plan to redesign Gmail into our new email service, Determined Mail. Our design will be based on both the previous research that has been done regarding website users with dyslexia as well as the results from our survey.

Determined Email will be an email service with less formatting options due to the fact that we want our service to be held to accessibility standards for users with dyslexia and other sight / language disorders. The only font options will be Sans Serif fonts, there will be no italics option, and the text will have larger margins to make sure that the text doesn't get too wide. In addition, there will be more space in between lines of text to increase readability of the text. Lastly, the font size has to be a minimum of 14pt to make sure that the text is never too small.

The inbox view of Determined Email will be almost entirely image / icon based rather than text based. In the inbox, each email will be the profile icon of the user who sent the email and a small section of the subject line. This is in contrast to the crowded text that exists within the Gmail box where the sender's name, email address, subject line, and beginning of the email are all included.

Task Analysis

Moving an email from one inbox to another on mobile app

Current Steps:

- Open email
- Press on three dots in top right corner
- Press “Move to” (only words are shown, no pictures, and all options are the same size)
- Select inbox to move email to
    - If a mistake is made, can press undo that comes up at bottom, but then you have to redo all the steps again

Our Version

- Open email
- Press on three dots in top right corner
- Press “Move to” (there will be pictures accompanying every option to better differentiate)
- Select inbox to move email to
    - If a mistake is made, it will bring you back to selecting inbox page, not make you to redo every step again

Task Environment Characteristics

- Needs to be available in any location on any device
  - Physically, the user could be anywhere, so determining a given environment is difficult
- For the software environment, most users access their email via web browser or mobile app
  - For web browser, the most common web browsers are Chrome, Safari, Firefox, and Microsoft Edge
  - For mobile app, it would have to be developed in-house for both Android and Apple operating systems
  - Since the product is primarily the UI design, an API is unnecessary

Since the user can access the product from any location, we must design for the worst possible location / scenario. Designing for sight / language based disabilities entails designing for the worst possible location in terms of being able to see the email service. A physical environment with glare, erratic, strong ambient lights, high sound level, and many distractions is, therefore, our design environment. If the user is able to use the app in that situation, they can use it anywhere. Based on those characteristics, we decided to design for a user who could be attending a large rave/concert, who is checking their email on a small screen like a phone.

Evidence Collected

Strategy of Gathering User Data

Due to the impacts of COVID-19, our team found that employing the strategy of utilizing a questionnaire would be more effective than conducting interviews. In addition, because our team lacks the resources to specifically find people who may be dyslexic, using a questionnaire allowed us to reach a wider audience that included people who have dyslexia and other sight / language based disabilities.

Our questionnaire consisted of three parts:

1. Use of Gmail - does the respondent utilize Gmail?
2. Dyslexia or Other Sight / Language based disabilities - does the respondent have dyslexia or a sight / language based disability
3. Readability of Gmail - a 16-item measure of whether or not Gmail is readable / easy to navigate

Evidence From Research

- In 2004, the UK's Digital Rights Commission attempted to study the usability and accessibility among blind, partially sighted, dyslexic users. The participants (50) completed two tasks on different websites. The common issues people with dyslexia experienced are included below (Disability Rights Commission, 2004).
    - Confusing page layout
    - Confusing navigation
    - Color selections
    - Small text and graphics
    - Complicated language
- In 2005, Jakob Nielsen, a web usability consultant who holds a Ph.D. in human-computer interaction, did a study on how low-literacy readers experience websites. From the results of his study, Nielsen made a few recommendations on designing for users with dyslexia. His recommendations are laid out below (Nielsen, 2008).
    - Making Text Size Selectable
    - Using Sans Serif Fonts
    - Using Colors to Highlight Important Information
- A 2009 study examines existing research that looks at dyslexia and web accessibility. In their conclusion, they explain that most accessibility efforts in tech tend to focus on blind and visually impaired users. However, they also discuss the fact that within these efforts, little has been done to address users with dyslexia. They also claim that there is a great deal of evidence that websites that forgo accessibility features for users with dyslexia can have impacts on the esteem and success of both dyslexic users and non-dyslexic users (McCarthy & Swierenga, 2009).

What We Learned

- Some people who have dyslexia and other sight / language based disabilities appear to have been able to adapt to the way Gmail has been designed in such a way that they are able to get tasks done
- For those who have been able to adapt, they still find parts of Gmail's design to be difficult
    - Still feel as if inbox is cluttered (even if they have organized their inbox)
- Still struggle with amount of text in the Gmail inbox view, and the colors of the Gmail inbox make it hard for them to easily see what is going on.
- Many of our respondents who self-identified as not having any sight / language based disabilities also had trouble with Gmail's design
    - Many respondents feel that their Gmail inbox is hard to organize.
    - They also think that there are too many words and not enough pictures or icons within Gmail.

Work Cited

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