Project Part 2b: Improving When2Meet
An even better way to schedule meetings & events

Human-Computer Interaction
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Abstract

Along with the advancement in technology, individual's schedules started becoming more complex. Somewhat ironically, as more things could be done in less time and as people became more interconnected than ever before, scheduling for groups rose up to be a major challenge. A website, when2meet.com, provided a simple yet amazingly effective method for groups to arrange a time to meet. It allowed for individuals to present a detailed range of options to plan for a specific event. When a software fulfills its essential needs so well, adding features to it may actually result in a negative outcome, making it more difficult for individuals to engage with it. Our proposal is to address the mobile version of the product.

As it stands currently, while it is possible to access the product through a mobile device, it is by no means optimized for mobile use. The purpose of this project is to address the mobile functionality of when2meet. Specifically, authors address the features of the product weakened by the change of interactive methods (i.e. from clicking and dragging of the mouse to touch and point of the finger), such as the selecting and deselecting of time and the zoom functionality. In addition, visual improvements in context of mobile environment such as adopting a horizontal arrangement and a more intuitive as well as aesthetically pleasing layout is considered.

Mission Statement: To provide the user with an easy-to-access, streamlined, and intuitive scheduling experience and to improve society's overall productivity.

Problem Definition

When first taking up the challenge to redesign the mobile interactions on the When2Meet website, it is important to first understand the challenge space. The challenge the group faces is how can we use usability heuristics and ideas such as C.R.A.P. to reduce user memory load, and . The idea of scheduling our time and organization requires knowledge of human

The benefits of this new virtual interaction method are widespread. More people of all backgrounds can be exposed to music without the need for entire collections of physical instruments where it would normally be difficult or impossible to acquire them. Also the modularity of a solution could allow for those with disabilities to customize how they interact with the virtual instrument interface and provide them with new access of instruments they would otherwise be unable to play. Previously significant physical disadvantages, such as length of the fingers or width of the arm span, no longer would be able to inhibit individual's ability to create music. Implementation of this technology would also enable its users to freely experiment with different types of instruments and potentially set up a new market of all-inclusive instrumental software.

Possible stakeholders that would be interested in supporting our challenge space would include: students in project groups, teachers organizing a faculty meeting,

To limit our research and prototype process, the initial scope of the project will be recreating a "virtual piano" with our new interaction controls. When trying to design and develop a novel way of interaction, it is important to look at all elements of usability (Nielsen 2001) to ensure the solution can be used effectively and best follow our mission statement. It is also important to examine solution usability to determine design requirements. The three most

important elements that we can apply during the planning stage are 1) match between system and the real world, 2) user control and freedom, and 3) visibility of system status.

Our mission statement and goals are centered around creating a streamlined and intuitive mobile scheduling experience and this involves matching the system to the real world as closely as possible. The system will follow real-world music conventions and have appropriate feedback depending on each note played. User and control freedom will be managed by having clearly marked exits for users to leave unwanted states and quickly continue producing the sound they intended. The solution will also be required to provide visibility of system status through responsive feedback about what is being played at all times.

Prototype Brainstorming

- High-level thoughts on possible solutions for designing and/or improving the given product.
    - SELECTING/DESELECTING TIMES
    - ARRANGING THE FEATURES SUCH THAT YOU DON'T NEED TO ZOOM AND SCROLL HORIZONTALLY
    - FIXING ZOOM FUNCTIONALITIES (currently can't zoom if one finger is on the calendar selecting aspect, etc.)
    - MAKING THE UI DESIGN MORE AESTHETICALLY PLEASING

In terms of usability, the current website is simple yet effective. However, this is only the case when it is used by desktop users. The components of usability that makes the mobile experience lag behind the desktop experience is in terms of efficiency and satisfaction. In

particular, the layout, selection widgets distribution, zooming functions, and the visual design are all areas that are lacking. However, the fact that it is far from perfect means that there is much room for improvement for emulating the mobile experience.

Many of the problems are related, thus overall usability may be easily improved. The main problem with efficiency is the difference in the amount of time it takes to fill out a schedule. The underlying problem stems from the difficulty of accurately selecting times available. This is the result of condensing the large selection screen (which is sizeable for a desktop) proportionately into the smaller screen of mobile devices. By creating a mobile site, the selection widgets may be enlarged to a size appropriate for mobile devices. This will be done similarly to the actual website, which is through logical pixels to ensure that the screen will adapt to the variety of mobile device sizes. However, the difference would be the ratio of pixels dedicated to the schedule selection mechanism. Instead of taking roughly about 1/15 of the site screen, a more appropriate ratio would be ⅓ of it, most likely on the left hand side to maintain consistency. The increase in size of schedule selection screen will lead leads to room for greater widgets sizes that will increases sensitivity and accuracy, thus decreasing the difficulty and the amount of time it takes to fill out a schedule

Additional zooming in and zooming out widgets will also be placed next to the selecting mechanism in the form of icons. The reason for the implementation of icons instead of a widget layout on top of the schedule is because there is already a selection widget grid and multiple layouts would interfere with each other, making it counter productive. The consistency amongst most sites is that users may zoom into nearly all spaces , so a typical user's response would be to zoom into the schedule if they have trouble selecting. However, it isn't possible to zoom and

select with one layout, so users who attempt to zoom will fail and feel frustrated. With the icons, the option of zooming is expanded and it indirectly notifies users that to zoom, they would have to use the icon instead of attempting and failing. This would increase overall satisfaction. The need to zoom will also be reduced by the increase in size of the selecting mechanism.

The overall visual design will mainly be changed for the better by the enlargement of the interactive schedule. Other changes in the visual design would be making the mobile layout vertical instead of landscape. Mobile devices are usually taller than they are wide as opposed to desktop monitors and laptop screens, so the change in the layout will make the users feel more comfortable. Information will also be displayed more neatly with a vertical layout, since information won't be as condensed. By doing so, customer satisfaction may be maximized as well as efficiency in navigating the site.

Expected Results

Through this project, we intend to gain insight into how to design for mobile platforms, how to use the capabilities of mobile devices to our advantage, understand the differences between how users interact with a webpage on a desktop/computer and smaller, mobile devices, and how users' experience is impacted by the webpage design. Because mobile devices tend to have smaller screens and users are using their fingers instead of a mouse, there are a variety of considerations that we have to take into mind for the users.

The purpose of changing up the design of when2meet on a mobile device is to allow for more ease-of-use of the website and minimize frustrations. Ideally, you do not want the user to be zooming in and out, scrolling both horizontally and vertically to access different features of the page and not using a mouse means that the user will be prone to errors and not have the

accuracy/precision that users get on a computer - these are some aspects that need to be considered when designing for mobile devices.

By changing the layout, we hope to improve on visibility and feedback of when2meet. Although we would be decreasing the amount of information that the user could see at one time, by making each step bigger and following the intuitive scrolling in webpages, users won't need to constantly zoom in and out of different regions and will be able to more easily and fluidly accomplish tasks in when2meet.

As a more overall design change, we hope to explore different visual design choices that best make users more satisfied when using when2meet. Although currently, it is simple and straightforward, there are various design choices that can be made to make when2meet more aesthetically pleasing to the users.

Our final solution should provide when2meet users with a more mobile-friendly look of the webpage that fits more with the screen these devices and allow for more efficient workflow when using when2meet on a mobile device.

Interesting Aspects

1. Focus on a mobile interface
   a. The group must consider the wide range of differences between mobile and personal computer interaction. The smaller aspect ratio and screen size of mobile devices must be taken into account as well as the various input options for navigating within a mobile subspace.
   b. why are you interested in that challenge?
2. Future program application

     a. why is it a challenge for interaction design?

     b. why are you interested in that challenge?

3. Shared scheduling & calendar options

     a. When2Meet does not currently have a user account system. All events are created as one-time events with no way of tracking how many you have marked or maintaining a consistent personal calendar to speed up the marking process. The team envisions a user login and profile page to accomplish both of these tasks, the pages must be easy-to-access and streamlined similar to the website.

     b. Approaching this challenge is critical to