Prototype demo: https://youtu.be/Nn7m71A-pVA

GitHub Repository: https://github.com/akdeo/CS160_p5

State Diagram:

https://docs.google.com/document/d/1RaelZr1IfDCSAST7_iusT1N9z8MlFurFQ6-QjCbZCg0/edit?usp=sharing

Design Concept

Our final prototype design concept combined our Dark Horse and our P2 Prototype, with learnings applied from our user studies. Our initial core HMW was “how might we enable two demographically similar people to discuss opposing opinions in a comfortable environment”? Our final prototype is a stand alone chat website that match makes two demographically similar people with differing opinions on an issue in a chat room in front of audience members (other chat with me users that want to watch a discussion on the topic). Users on our site can create chat rooms (Chat with me will automatically match them up with a similar user with a different opinion on the issue), join chat rooms as a participant (CWM notifies potential users in a chat room browse screen of potential chats), or join chat rooms as an audience member. Our core user task in the prototype is discussing an issue with another similar person in a chat. This core functionality hasn’t changed from our P4 prototype, but we learned through user studies that having a product built around Facebook and Chrome plugins got very confusing for users. This motivated us to build our own website and chat system. The core user task clearly addresses the first part of our HMW and delivers utility in that regard. When two similar people are able to talk about their differing opinions, they tend to focus more on the content of the discussion rather than dismissing a stance because of the opposition’s differing background. To solve the second part of our HMW (creating a comfortable environment), we took inspiration from our Dark Horse prototype. In our Dark Horse prototype we found that people were self-conscious and acted more positively in the presence of reacting audience members. We took this idea and instead of a “Twitch.tv Chat” like in the Dark Horse Prototype, we created a compliment chat where audience members could positively “react” with “good jobs” or “great attitudes” when the participants were thoughtfully and respectfully contributing to the discussion. The addition of these moderating audience members incentivizes our core user task participants to make the environment as comfortable as possible.

Reflection on User Study

In our study we compared our P2 prototype to our Dark Horse prototype. Our P2 prototype was a chrome/facebook bot chat system that enabled you and friend to discuss opposing points of view on an issue with two other random individuals. Our Dark Horse prototype expanded upon this and created a more antagonistic Debate Chat Room where one user went up against many other users in a video chat room, with an audience watching like on Twitch.tv.

From a UX perspective, we learned the core setup of our product was extremely confusing. Specifically, for both prototypes, users didn’t really understand the usage/purpose of the chrome and facebook bot plugins. We learned that users had negative reactions to the login/sign up page; specifically, where users input their account information and download the google plugin/facebook bot. Users found that they had to fill out too much information, and that the page and therefore, the profile page seemed cluttered. Additionally, the users were confused as to which buttons to press/if they were supposed to press buttons

while waiting for the plugin and bot to download. They were also not sure how to save the information they had on their profile. Our prototypes (P2 and P3) were designed to incorporate the autosaving mechanism, but the prototypes did not explicitly indicate this feature. Therefore the users got lost in trying to find the save button after filling out their profile information.

After the user eventually got through the sign-up/log-in process, they were unsure of what to do next. We didn't have any signifiers or instructions to direct them to go to Facebook and start chatting with a friend. Almost every single user had a long pause >10-15s at this juncture, and we usually had to give them information to urge them on to the next section. Furthermore, once users got to the facebook messenger screen, they were unsure of what commands they needed to input to launch the chat/debate room in both P2 and our Dark Horse prototype. So at this stage of the testing, users stalled again and required our help. Our biggest insight from our UX flaws was that our core user task needs to be encapsulated within 1 service, instead of using 3 separate ones (a website, chrome plugin, and facebook bot). This was an area that we could get a huge UX upgrade in.

For prototype P3 (our dark-horse prototype), although the debate room was generally well-received, there was some user confusion: We showed the user a browser screen with all of the webcast screens, and they were confused which screen was theirs; this is because webcast screens did not explicitly indicate which user screen belonged to the current debater (through user id identification etc.). The user also thought it was repetitive that they were prompted to join the debate room when they were the one who initiated the debate. Note that this is a surprising observation since the users of the P2 prototype felt that they should have received a chat notification when they were the one who prompted the facebook bot with /chatwithme/ command to launch the chat. From our P2, users were also unclear about how to save profile information (the auto-save was not explicitly made clear). Overall, there was too much user confusion regarding the fb bot and how the google chrome plugin fit together for both P2 and our dark horse. In Debate with Me, we need to indicate the user's unique id being displayed on each debate screen, so the browser screen with webcast screens will have no ambiguity as to which screen belongs to the particular user debater. We will also have to conduct further user studies to determine whether or not to show notifications prompting users to join the chat or debate room if they were the ones who launched the chat or debate, since we observed mixed reactions/feedback on this issue.

A bright point in what users found intuitive was actually being in the chat room with other participants. They understood their purpose and found utility in have a structured discussion with similar people with differing opinions. Users were clear as to how to navigate back to the home page, leave the chat room/debate room and how to join the chat or debate as a notification to join appeared. Users also enjoyed the interactivity of our prototype, specifically being able to interact with new people. This made us realize that in our final iteration, we should keep the core user task of people coming together to discuss an issue, instead of having a user interact with just a new article, or inanimate object.

Our quantitative measures were survey questions (improvements, usefulness, comfort level in sharing opinions), qualitative measure (frustration, intuition, commentaries), and quantitative measures (task completion time, # wrong clicks and long pauses). P2 took only ~2 min, while P3 ~6 min, already suggesting that P3 was much harder to understand and more complicated. Users made 0 wrong clicks in P2 but 3 wrong clicks in P3 also suggesting that P3 was more confusing than P2. Overall, from our quantitative measurements, we discovered a correlation between number of differing moving parts (# of jumps between different services) and overall confusion with the product. While in both prototypes, users experienced frustration, confusion about how to proceed, and the same number of long pauses, P3 had more negatives than P2. Overall, P2 was the clear winner, but both P2 and P3 were overly complicated

and there was not much instruction for the users to intuitively learn how to proceed to the next step. Having fewer screens, removing the facebook bot, and having less text on the webpages would make the user experience more positive.

From a more qualitative perspective, we realized that even though our Dark Horse incentivized winning and being stubborn, the audience integration caused participants to think more aloud about their behavior. Users did have concern about a live chat, especially in relation to toxicity. In designing our final prototype, we realized that having a positive, compliment oriented audience/twitch chat could serve as a moderating factor in the discussion and make the discourse more comfortable. We discovered from talking to users that having an audience didn't automatically make them nervous, it was more of having to "perform" with their real faces in front of an audience they could read the negative reactions. This concern with the Dark Horse also led us to realize that having a degree of anonymity was very important.

Overall, we learned that our core user task addresses only 1 part of the HMW, matching up similar people to discuss differing perspectives. Users demonstrated clear positive reactions to this mechanic. Unfortunately, we learned that we didn't develop the most comfortable environment possible, as symptomatic through our UX and overall product design. Improving comfortability will be a key feature of our next prototype.

P4 Conceptual Use Study Measures and Data for Reference

Measures for Study

Survey Questions

1) Did you feel stuck or confused at any point?
2) What improvements do you want to see in the product?
3) Do you find this product useful?
4) Were you comfortable discussing controversial issues with complete strangers in the group chat?

Qualitative Measures (observations)

1) Intuition about what is going on-any stuck points
2) How do they figure out what to do next? Are we adding the proper signifiers throughout the product?
3) Did the user make any comments suggesting something was annoying or repetitive?
4) Did the user get frustrated?

Quantitative Measures

1) Time it takes to complete (is task completed on time?)
2) Number of wrong clicks
3) Number of long pauses (over 10 seconds)
4) Number of positive commentaries & number of negative commentaries while using the UI (positive commentaries % over total number of commentaries)

Study Procedure

1. Focus on measuring utility and ease of use. We want the product to be self-evident in it's ability to burst echo chambers, as well as enable the user to traverse through the product unguided.
2. 2 people conduct the user study (as defined by walking through the lo-fi prototype event sequence for P2 prototype), while 1 person measures qualitative performance and 1 person

measures quantitative performance based on measures defined above. We ask survey questions at the end.

3. Repeat steps 1 & 2 again for P3 (dark horse) prototype with another group.
4. Analyze user data collected.

Data Collected in Studio

P2 Prototype Study

Qualitative Measures

1) **Intuition about what is going on-any stuck points**
    a) At critical stuck points, intuition didn't really help the user navigate to the next section. Specifically they got very stuck after the sign/signup process. A key problem I noticed that the user was frustrated with is that it wasn't clear that our product was an overlay for an existing chat platform.
2) **How do they figure out what to do next? Are we adding the proper signifiers throughout the product?**
    a) We had to tell to them what do at specific pauses. The user seem to get frustrated and not understand the leap between sign up and chat. Furthermore, within the fb chat with a friend, they were unable to intuitively figure out which commands to tell the FB bot
3) **Did the user make any comments suggesting something was annoying or repetitive?**
    a) They disliked the sign-up flow and lack of clarity around fb bot commands
4) **Did the user get frustrated?**
    a) The user experienced frustration when there weren't enough directions on what to do
5) **Other Observations**
    a) The study didn't go smoothly because we had too many moving parts

Survey Questions

1) **Did you feel stuck or confused at any point?**
    a) Yes, during login and initial opening of the chat
2) **What improvements do you want to see in the product?**
    a) Login page was difficult and cluttered to understand
3) **Do you find this product useful?**
    a) Definitely find the product intriguing, it reminds them of slack
4) **Were you comfortable discussing controversial issues with complete strangers in the group chat?**
    a) They were comfortable because they had a friend in the chat with them

Quantitative Measures

1. **Time to Complete** (navigating through the entire UI): 2 min 14 sec
2. **# Wrong Clicks:** None
3. **# Long Pauses (over 10 sec.):** 1 long pause: User was confused about the chat box that had the word "/chatwithme/". They didn't know what to expect
4. **Positive Comments (50%):**
   -Users would use this feature more often
   -Users liked how they could converse with others about this topic, other than just their friends, and in the process could gain a different perspective
5. **Negative Comments(50%):**
   -The profile home page was too cluttered. There were too many questions that the user had to fill out

-It was confusing that the user who launched the /chatwithme/ command on the chat bot pop-up did not themselves receive a notification to join the group chat (unlike Mary and Justin) who received the chat notifications of “yes”, “no”, and “decline”.

P3 Prototype Study

Survey Questions

1) **Did you feel stuck or confused at any point?**
    b) Felt stuck after login
2) **What improvements do you want to see in the product?**
    c) Do not like how aggressive the product is. It’s too uncomfortable to have to try to debate
3) **Do you find this product useful?**
    d) Product is too combative to frequently use. They don’t like the idea of “publicly” shaming other people. They dislike the idea of winning or losing when it comes to educational discussion
4) **Were you comfortable discussing controversial issues with complete strangers in the group chat?**
    e) If they lost one of two of these debates, they wouldn’t do it again, and definitely wouldn’t do it with a friend. They don’t trust strangers.

Qualitative Measures

1) **Good intuition about what is going on-any stuck points**
    a) Not really, it’s not very intuitive
2) **How do they figure out what to do next? Are we adding the proper signifiers throughout the product?**
    a) No idea what to do with the FB Bot and chrome plugin, it’s not very explained - commands are hidden for FB Bot
3) **Did the user make any comments suggesting something was annoying or repetitive?**
    a) “Even though I started the debate, I have to join it myself” which is unintuitive.
4) **Did the user get frustrated?**
    a) User isn’t sure what to do after clicking the download link in the setup page.

Quantitative Measures

1. **Time to Complete (navigating through the entire UI):** 6 min 26 sec
2. **# Wrong Clicks:** 3
   -User was confused about the auto-saving mechanism that was used when updating the user profile page. They tried to change their preferences but were unable explicitly find the button that said “update” or “save”.
   -Based on the dialogue in the chat pop-up box, user was under the impression that they were part of the “CON” side for the question: Are the warriors better than the lakers? So they pressed the “CON” button, instead of the “PRO” button. Fix: The dialogue in the chat pop-up window should be consistent with the side the user joins when the enter the virtual debate room
   -The user was confused about the page that showed all of the debators (who have already joined the chat room). They thought that they had to choose which number debator they got to be. So, they were confused when their turn automatically came up to speak.
3. **# Long Pauses (over 10 sec.):** 1 long pause: User was confused about the chat box that had the word “/debate/”. They didn’t know what to expect, since they probably had not used a chat bot before

4. **Positive Comments(50%):**
   -Liked the fact that there was an option to leave the debate at any time
   -Liked the fact that we are bringing complete strangers into the debate room (as opposed to friends), since the user felt more comfortable debating against a stranger than a friend and prefers to express their biases to a stranger rather than to a friend
5. **Negative Comments(50%):**
   -Was confused about how to get back to the home screen and profile page
   -User would be less motivated to continue using the app if they lost too many debates (thus had very few points).