right2vote

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INTRODUCTION

In this low-fi prototyping exercise, we are using a series of tests to evaluate the right2vote mobile application concept. This mobile application aims to encourage young people to vote by supporting the voter education process. In addition, right2vote also provides election day support such as mapping to voting locations and sending the user calendar alert. By engaging with various users to test our system, we are hoping to evaluate our user interface to provide the best experience and concept design. In a series of tests of the different functionalities of our system, we hope to provide a comprehensive look at the strengths and weaknesses of our current product.

MISSION STATEMENT

Our goal is to connect voters with candidates who have similar political views and agendas. We hope to create an interface that allows users to learn more about political issues and clarify their positions. We also hope to simplify the voting process by providing instructions about how to vote and reminders to go to the polls.

PROTOTYPE

Our prototype includes major interface screens imposed on top of an iPhone 5. These screens included the main home screen, policy statement screens, candidate screens, ballot screens, and a voting screen. The prototype includes an abridged version of the full app; it guides the user to rate his/her opinion on specific issues, forms the users' ballot based on the user's stance on these issues, and provides logistical information on how to cast one's ballot. All screens are drawn with only black ink.

To begin, the user is presented with the main home screen (*see Figure 1*). This screen lists all relevant issues in the upcoming election. At the very bottom of the screen, the user can view his/her ballot. The ballot develops as the user continues to rank his/her opinion on each issue.

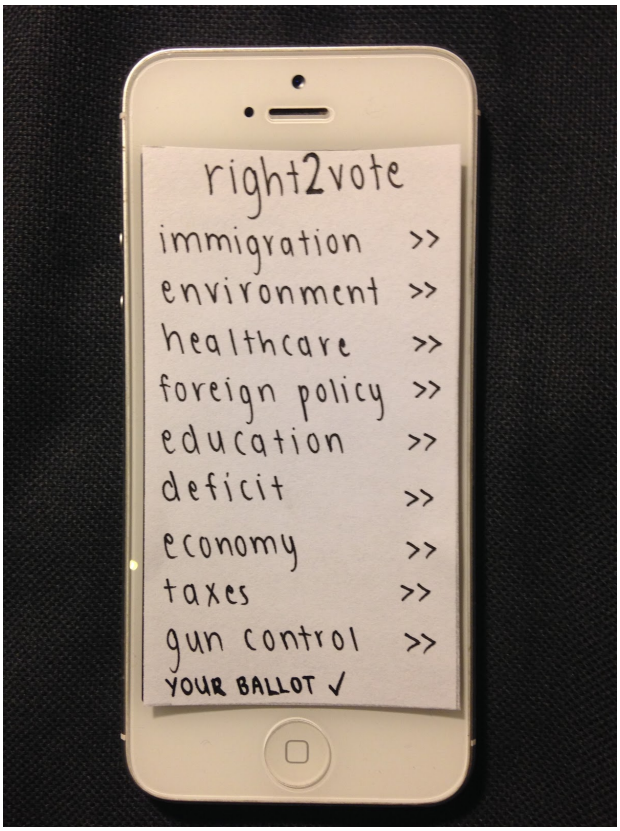

Figure 1: Home screen

To rank an issue, the user swipes across the issue title on the home screen. When the user swipes across an issue, a policy statement about the issue appears (*see Figure 2*). If the user agrees with the issue, he/she swipes right. If the user disagrees, the user swipes left. After swiping, another policy statement appears (*see Figures 3 and 4*). The user continues to swipe in agreement or disagreement with each statement. In this prototype, we have three screens of policy statements regarding foreign policy. At the bottom of each policy statement screen, the page indicator (three dots) indicate how many more policy statements the user needs to answer within the issue category.

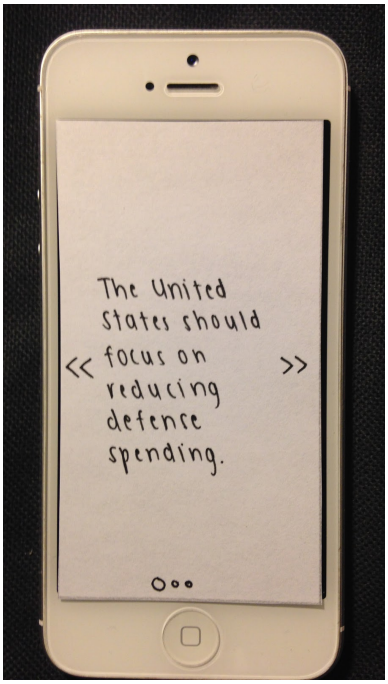

Figure 2

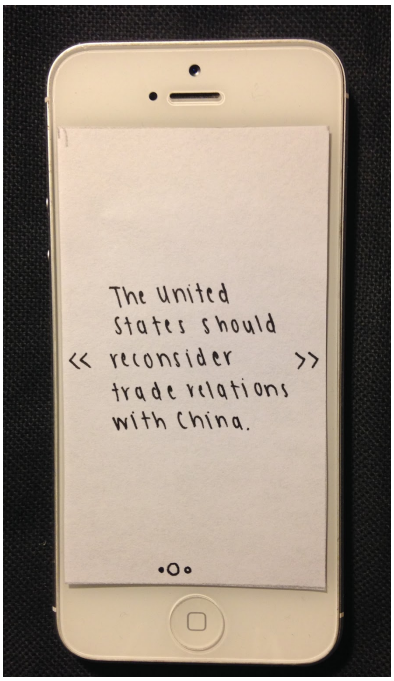

Figure 3

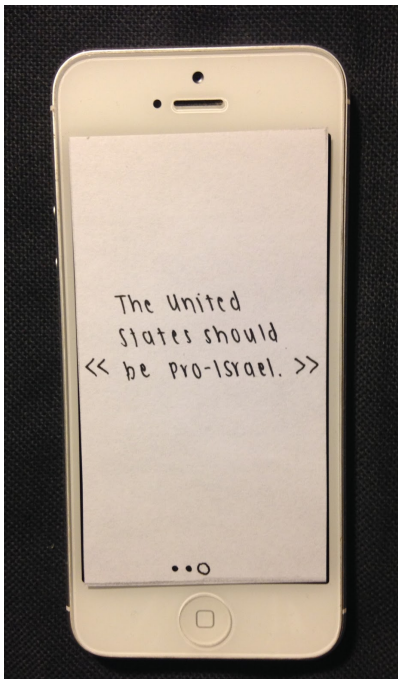

Figure 4

After the user finishes answering all policy statements within an issue category, a screen pops up indicating which candidate's platform is more aligned with the user's on that specific issue (*see Figure 5*). This screen includes an icon of the candidate and a description of the candidate's platform regarding the issue. In the bottom right corner, there is an icon of the other candidate. The user can click this icon to learn more about the other candidate's platform regarding the issue.

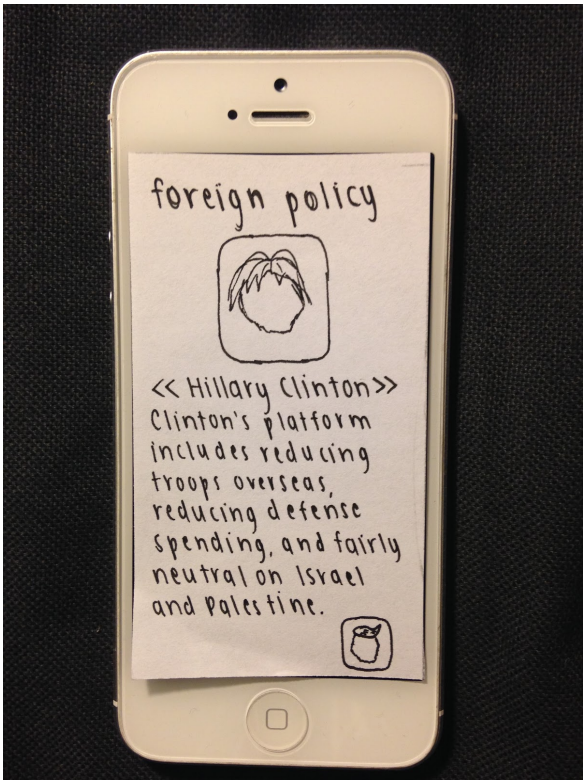

Figure 5: Candidate match for foreign policy

The prototype then includes a screen of the entire ballot (assuming the user has answered all statements for each issue on the homepage. This screen of the user's ballot outlines the issues the user is aligned with for each candidate (*see Figure 6*). The ballot can be viewed by returning to the home screen and swiping right across the very last line, labeled "YOUR BALLOT >>" (*see Figure 1*). On the bottom right corner of the ballot screen, there is a check mark icon. After clicking this, the user is brought to a screen labeled "Your Vote" (*see Figure 7*). This screen outlines all logistical information directing the user how to vote, including the date and polling location. Swiping right across the date takes the user to into Apple iCal to create a new event with the voting day information (*see Figure 8*). Swiping right across the location takes the user to a map screen with the user's current location and the closest polling locations (*see Figure 9*).

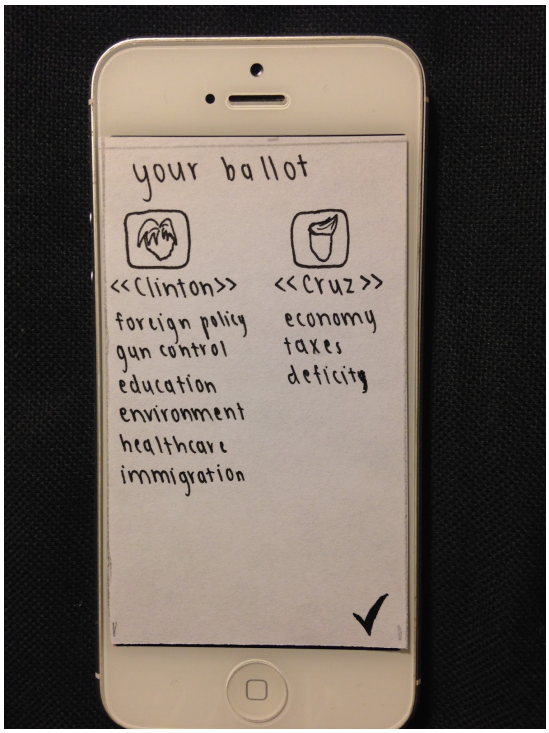

Figure 6: Your Ballot screen

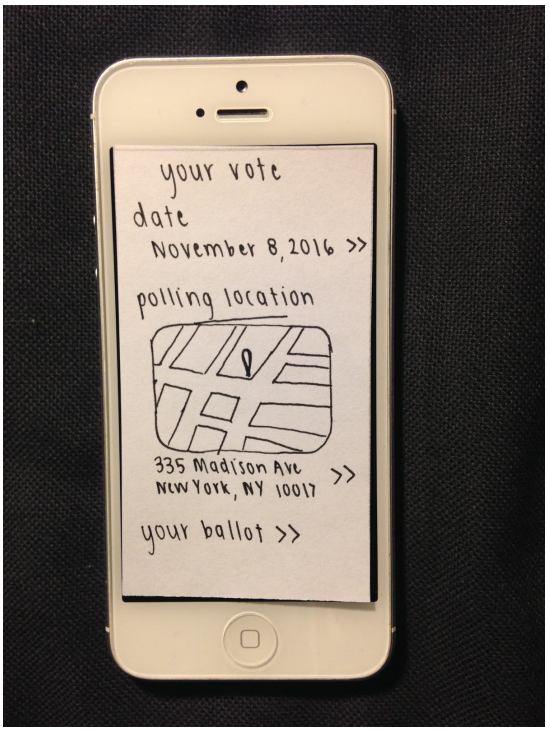

Figure 7: Your Vote screen

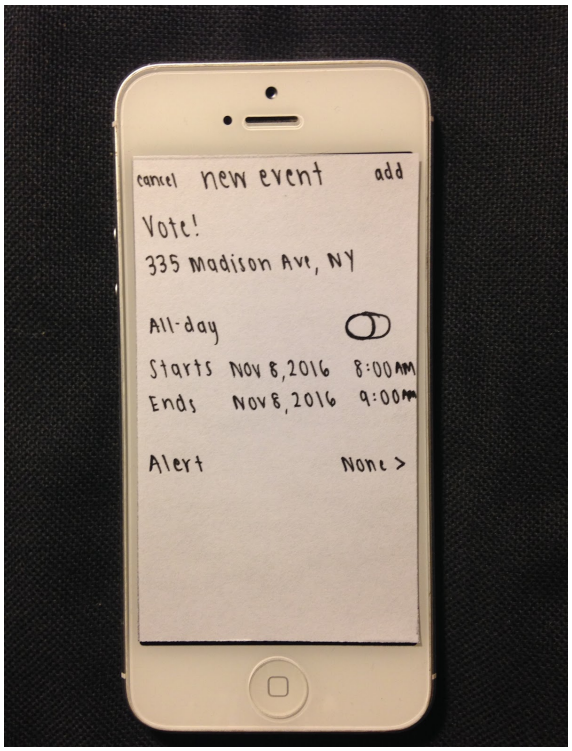

Figure 8: iCal create new event screen

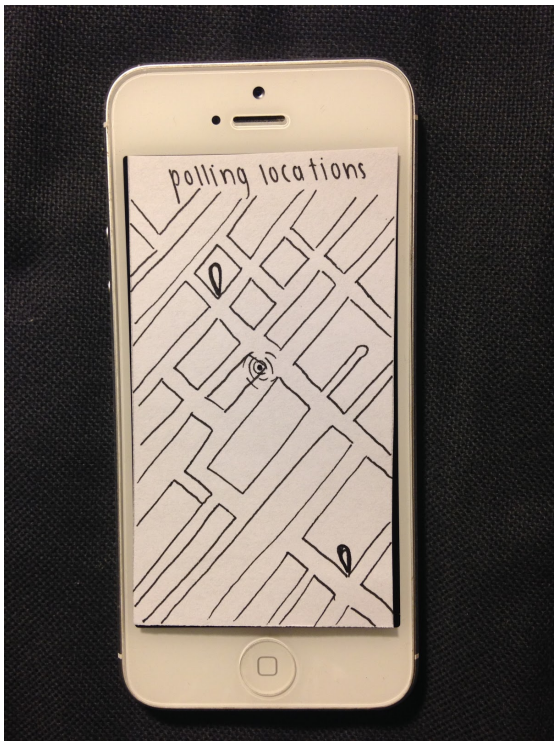

Figure 9: Polling locations map

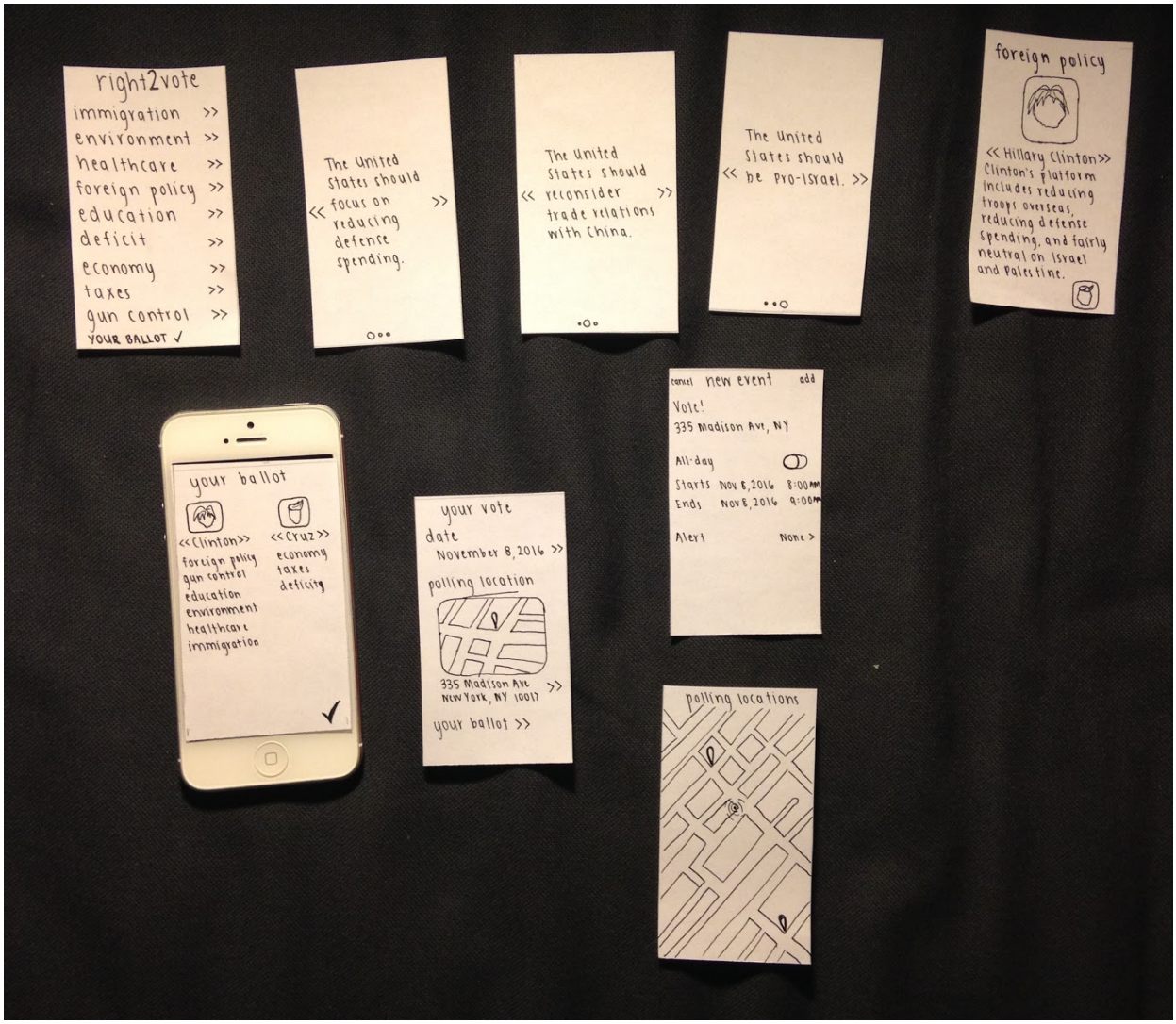

Figure 10: Entire prototype layout

METHOD

Participants

J.O. is a Stanford student that is majoring in Product Design. She is also a member of Stanford Sophomore Cabinet and a varsity athlete. She was selected because she is a very active and involved member of the Stanford student government so she has run in an election, campaigned, and encouraged people to vote. In addition, since she is extremely busy with her sport, she does not have the time to research elections as she

would like. Her tester found J.O. at the Stanford campus Starbucks, so she was compensated with a coffee before the interview.

C.J. is a Stanford student majoring in economics with a minor in computer science. He does not keep up on politics. He also has not yet voted in an election. C.J. is the exact user we want, uninterested in politics, to vote. He was found by talking to students at Old Union, the second floor to be specific. C.J. did not receive any compensation aside from a smile and emphatic 'thank you'.

A.S. is a Stanford student majoring in computer science. He was found at an event hosted by the Stanford Computer Forum, where he is an employee. He has programmed extensively, but has little background in mobile development. He is uninterested in American politics, though does at time keep up with international news. He has not voted. We compensated A.S. by helping him clean up after the Computer Forum event.

Environment

C.J. was interviewed on the second floor of Old Union. He was given the low-fi prototype and told about the basics of interaction with it. At this point, his interviewer navigated him to the right2vote home screen. From there, C.J. interacted with the low-fi prototype accomplishing all three tasks in sequence. This is the ideal environment for us to test. We expect our users to be busy, be doing work, and then interact with our applications. Its selling point is its ability to fit in with normal, busy, daily life.

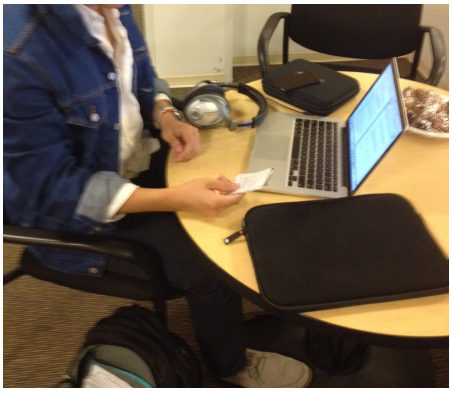

Figure 11: C.J. using prototype

After meeting J.O. at the campus Starbucks, she was interviewed two hours later in the lounge of her dormitory because that is where her interviewer decided would be a good place to conduct an unbiased interview. The interviewer felt this was appropriate

because this setting is a busy location where we envision a user using right2vote. In addition, J.O. does the majority of her school work in this lounge so it was an appropriate place where she would be using right2vote. Her interviewer set up the prototype on her iPhone and swapped the screens whenever J.O. proceeded through the tasks to alternate screens of our prototype.

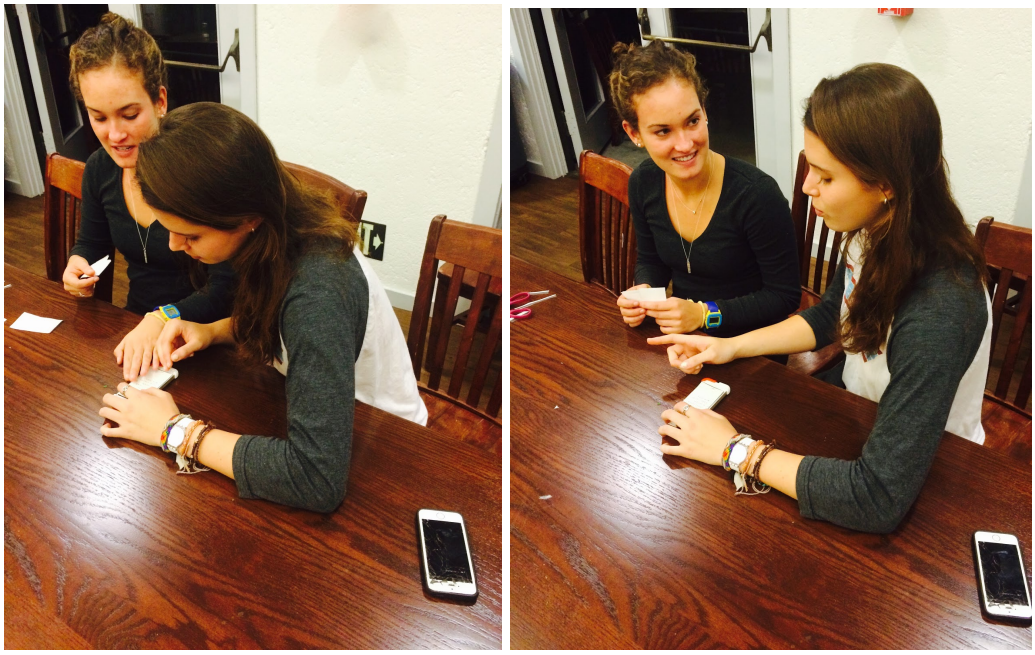

Figure 12 and 13: J.O testing the user interface

A.S. was interviewed in his dorm room, where he does most of his work and spends the majority of his time. His workspace is very neat and clean, and A.S. feels most comfortable completing his work in an uncluttered environment, even when just browsing the internet. We used his iPhone for the tests, and he was successfully able to navigate from the home screen through the three tasks.

Figure 14: A.S. Testing the user interface

Tasks

As discussed in our Prototype section, the prototype includes three main tasks that will be included in the full mobile application. The three tasks include: guiding the user to rate his/her opinion on specific issues, forming the users' ballot based on the user's stance on these issues, and providing logistical information on how to cast one's ballot.

Procedure

Maya Israni: Designer

Maya Israni acted as the Designer for the testing procedure. She created the lo-fi prototype and taught the team how to interact with the paper model. She acted as the point person in questions about how to use the prototype and provide the initial theory for our initial UI concept.

Marina Elmore: Interviewer

Marina Elmore acted as the Interviewer for the testing procedure. She created the script for the interviewers that each team member used to conduct interviews for various Stanford students. She also acted as the interviewer when we practiced our prototyping interview procedure as a team.

Devon Hinton: Facilitator

Devon Hinton acted as the Facilitator the the testing procedure. He began this process by deciding what groups of students we want to target in our prototyping exercise. He also set up interviews with different young adults that

the group met in order to provide a broad range of testing participants. In addition, Devon arranged the Consent Forms and brainstormed ideas for compensation for the different test subjects (not all subjects wanted compensation).

Christina Gilbert: Computer

Christina Gilbert acted as the Computer for the testing procedure. She decided how the different tasks would interact with Maya's design concept. She planned the different transitions between the screens and the order in which we should test our different tasks. She also acted as the participant in our practice interviews.

Test Measures

The test measures that we looked for are as follows:

NEGATIVE:

1. Confusion
2. Needing to ask for help out of frustration
3. Statements such as "What do I do next?" or "So now what?"
4. Negative body language: sighing, slouching over, frustration
5. Desire to end the testing session (beyond the fact that participants lead busy lives)
6. Errors made
7. Excessive amount of time to complete tasks

POSITIVE:

1. Positive Statement such as "Cool" or "Nice"
2. Positive body language: engaged, intrigued, interested
3. Cues that they understand the process of the app: nodding, "ohh"s, relaxation of furrowed brow
4. Being able to explain the steps that they are taking (Ex. "So to do Task #1, I click this button and then it takes me to this screen.")
5. Quicker movement around UI, quick completion of tasks
6. Limited errors made

RESULTS

Our first key result is that our interface is simple and easy to interact with. The participants did not struggle to complete any of their tasks. After completing all the tasks, the participants describe the interface as 'easy' and 'simple'. We also received

confirmation on the larger mission of the app: to inform and encourage votes. Thus our main takeaways centered around smaller UX features of the system.

One change was regarding our swipe mechanism (*see Figure 14*).

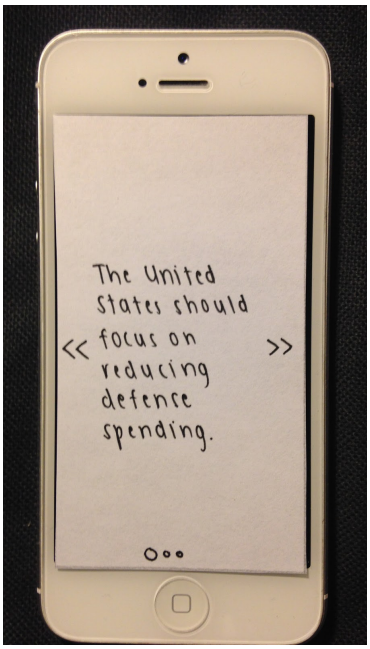

FIgure 14: Original swiping mechanism

C.J. reacted to this screen with (paraphrased) ‘so I guess you swipe right, to agree and left to disagree, right?’. His need to clarify the correct behavior to reach his desired goal (agree with this card) made it clear this needs work. Lucky, the fix is conceptually simple, add an indicator for which direction is ‘agree’ and which ‘disagree’. We reiterated this so often among our team that we forget it was not self-evident. Thus, the user testing really helped.

J.O. was confused by the transition from swiping policy statements to the candidate. She stated that it was an extremely abrupt transition and did not understand how the two screens correlated. She said that it would be helpful if there was a screen in between the two that alerted the viewer that they had completed all the policy statements.

A.S. was confused by the icons on the bottom of the swiping screen indicating how many statements the user has swiped through. He thought that swiping right would move him to the next statement, left to the previous statement, and he wasn’t sure what to do with the statements on the screen.

DISCUSSION

From the experiment we take away two categories of improvement — UI and structural. The UI fixes will be implemented as we move forward and have relatively clear solutions. The structural improvement is at this point a problem that requires a brainstorm session. Overall, the users felt the system was intuitive, logical, and had few real problems using the system.

The first UI change will be to fix C.J's confusion of 'which swipe direction is agree?' and A.S.'s related confusion of what swiping does (react to the statement or change the screen?). We overestimated the affordance of three 'arrows'. Tinder's interface is not so common as to become as second natured as Apple's mouse or the iPhone home button. We need to give users clearer indications of which direction to swipe to agree or, alternatively, use a different mechanism than swiping.

The second major UI change will be to fix C.J's confusion on how to utilize the ballot page. We want to make this page more valuable than the visual presentation of your choice of candidates. We need to brainstorm but, tentatively, will add links to more resources as well as a more granular breakdown.

The third major UI change will be to fix A.S.'s confusion with the arrows around the names of candidates. Because we used arrows elsewhere on the interface to indicate swiping, he thought they also indicated swiping in places that they did not.

Finally, our structural take-away. J.O. was confused by the transition from swiping on issues to picking a candidate. J.O. felt it was too abrupt. The candidate choice was not supported by enough data. Whether this will be solved when the user has to go through every policy area (Foreign Affairs, the economy) and answer more policy questions, is yet unclear. To solve this problem right2vote needs to brainstorm and test more!

Though our users did find the application very easy to use overall, this takeaway has some limitations. Namely, we broke down tasks for the user to complete. Thus, we cannot answer the question 'how confusing is the system when the user is given no direction?' And 'are these the tasks the users truly want to perform?' In the end, the results are very helpful but we have to remember a lot of work yet remains.

APPENDIX
Consent Forms

Consent Form

The right2vote application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of right2vote. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers (Christine Gilbert, Maya Israni, Devon Hinton, Marina Elmore) or with Professor James Landay, the instructor of CS 147:

James A. Landay
CS Department
Stanford University
650-498-8215
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the right2vote experiment. I also give permission for images/video of me using the application to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time

Name Chris Min

Participant Number 1

Date 10/23/14

Signature

Witness name Devon Hinton

Witness signature

application provide data that is used to evaluate and modify the interface of [TEAM NAME HERE]. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers ([TEAM MEMBERS NAMES HERE]) or with Professor James Landay, the instructor of CS 147:

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Name Julia Olson

Participant Number _____

Date 10/23/14

Signature Julia Olson

Witness name Ian McCall

Witness signature Ian McCall

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Name Ashwin Sreenivas

Participant Number 2

Date October 23rd, 2014

Signature Ashwin

Witness name Sarah Kahn

Witness signature Sarah

Demo Script

Task One:

"Let's pretend that its a month to the election and you are trying to do your research for the election"

Navigate to issue screen

"We want you to discover your political leaning on the issue of foreign policy"

Click "Foreign Policy" on the screen

"Can you show me how you would accomplish this task using right2vote"

Flip through the different cards with the policy statement

Get to the end which shows the candidate for the issue

Task Two:

Which candidate is best for you to vote for?

Navigate to screen that says "your ballot"

Task Three:

Now it is voting day, how will you find out where to vote?

Navigate to the screen with "Your vote date"

Click the "Date" arrows will send you to the iCal event

Click the polling location will send you to the map

Raw Process Data

Subject One

Task One:

He is unclear about to proceed. He is looking at the interface perplexed.

He asked me to confirm if it was 'swipe right' for agree and swipe left for 'disagree' like 'Tinder'.

Okay he is moving through the tasks fine

Done!

Task Two:

He is saying mhmmm and looking at the ballot screen.

I'm not sure he quite gets it, he is pointing and still saying mhmmm.

It appears he does not quite know what to do here. How do I move forward?

Task Three:

Very intuitive. He breezed through this task in about a minute

The 'map' abstraction is so common and makes so much sense for finding polling location

Subject Two

Task One:

He is at first confused about how to use the interface, but figures it out. He asks whether or not he should swipe left or right for yes and no

He is confused by the markers at the bottom of the screen, and the screen itself being swiped

He successfully navigates the task

Task Two:

He likes the lists of issues for each candidate. He finds this useful for voting.

He is unsure about how to proceed.

Task Three:

He understands that he should click on the map. He does not know how to navigate back from this screen.

He understands clicking the date will lead to the calendar. He is still unsure about how to return to the home screen, or the swipe screen.

Subject There

Task One:

Tells me that the interface makes sense and is intuitive.

Asks "Do I swipe left or right for yes and no?"

Understands the interface, but is surprised when the candidate message pops up. "Wait so what just happend?"

She successfully completes task one.

Task Two:

Uses positive buzzwords such as "Okay, Got it, Cool"

Seems to understand the general flow of the material

Task Three:

She does not seem to understand that this screen leads to three different tasks.

Is surprised when clicking ballot returns to the ballot screen and doesn't understand how to navigate back

Likes that the event is synced/added to the calendar

Says the map should map from the home location the user inputs rather than their current location by default. But that we should still be able to navigate from current location.