Testing the accuracy of voter data collected through the "Your Voice" mobile app and the study of the application's usability

BY: DONOVON BROWN

"Your Voice" is a mobile voting application that will offer the security and accessibility convenience of voting on the go.

THIS IS NOT AN APPLICATION MEANT TO REPLACE THE STATUS QUO OF THE VOTING PROCESS. THIS IS A PROCESS MEANT TO ALLEVIATE LONG LINES AT PRECINCTS AND OFFER VOTERS OPTIONS.

Executive Summary

This application idea came into development following the failure of the voting application used on February 3rd in the Iowa Caucuses. The project application will be managed by me, the primary investigator. The primary stakeholders in this application are me, Dr. Liu (my faculty advisor), and the primary users of the application. Secondary stakeholders will be government officials contacted to give advice and assess the feasibility of this application. The mission of the "Your Voice" project is to provide a stable and secure democratic voting experience to users electing government officials to office.

Introduction

This project will be implemented with a several tests and user tasks analysis to ensure the user needs and individual requirements are met. The voter data analysis portion of this project coincides directly with informatics studies. Once this application is designed it will test the accuracy of voter data collected through a mobile application called "Your Voice." After the votes are tallied via the website they will be confirmed and verified with the user. The votes are data measured. The application is the technology being used to measure data and confirm it is correct. The survey that will be given to all clients that use the app will contain questions pertaining to the usability of the application. This portion of the project links directly to my concentration in Human-Computer Interaction and will gauge the user experience so ongoing adjustments can be applied. With any system constant updates should be made and ideas can be derived from the user base.

Acknowledgements

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STARR BRUNER (USER 2) - TRANSITION DIRECTOR FOR THE GEORGIA COUNCIL ON DEVELOPMENTAL DISABILITIES

DR. FENG LIU – INFM 498: INFORMATICS CAPSTONE PROJECT INSTRUCTOR

Research Question

How can the Democratic Process of voting be improved within the United States of America?

Research Question (cont.)

Paper Ballots, Voting Machines, Identity, and Timeliness are all areas that can be improved. I'll explain how.

Hypothesis - The introduction of the "Your Voice" application will make our voting process more accessible and secure over time with repeated updates based on user task analysis and post-use surveys used to gauge usability. Long lines and misinterpretation will no longer be the fate of our democracy.

Background

Adjustments were made as of 3/21/2020 due to the Covid-19 pandemic. The primary area of study where data will be collected is application usability. The covid-19 pandemic had a specific effect on the importance of this capstone project and the need for a mobile voting application in our society. This is echoed by both users participating in this capstone study in the user-task analysis videos. The objective of this project is to provide a secure mobile voting platform for users to access as a supplemental alternative to going to the polls in person or voting by mail. The scope of the project is to investigate what users would like to see in a mobile voting application and how they would use it.
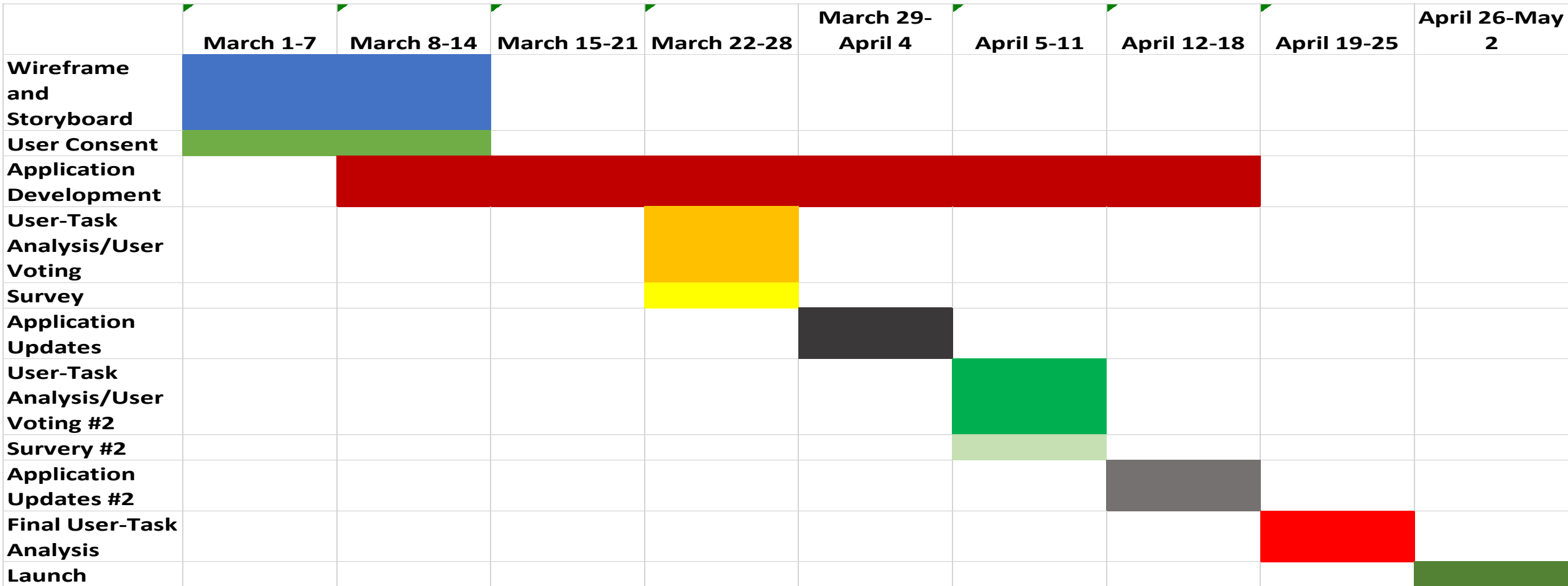
Proposed Methodology

The study population, data collection techniques, data analysis, location, research design, rationale, obstacles/risks, and observations.
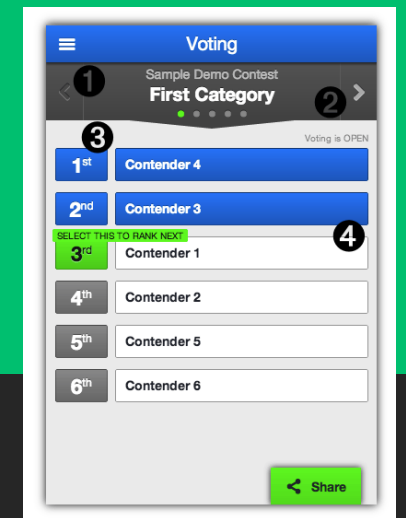
Data Collection Instrument

There will be 2 data collection instruments used. The voting application developed and used on mobile devices will be one instrument. The survey administered via Survey Monkey will be the second.

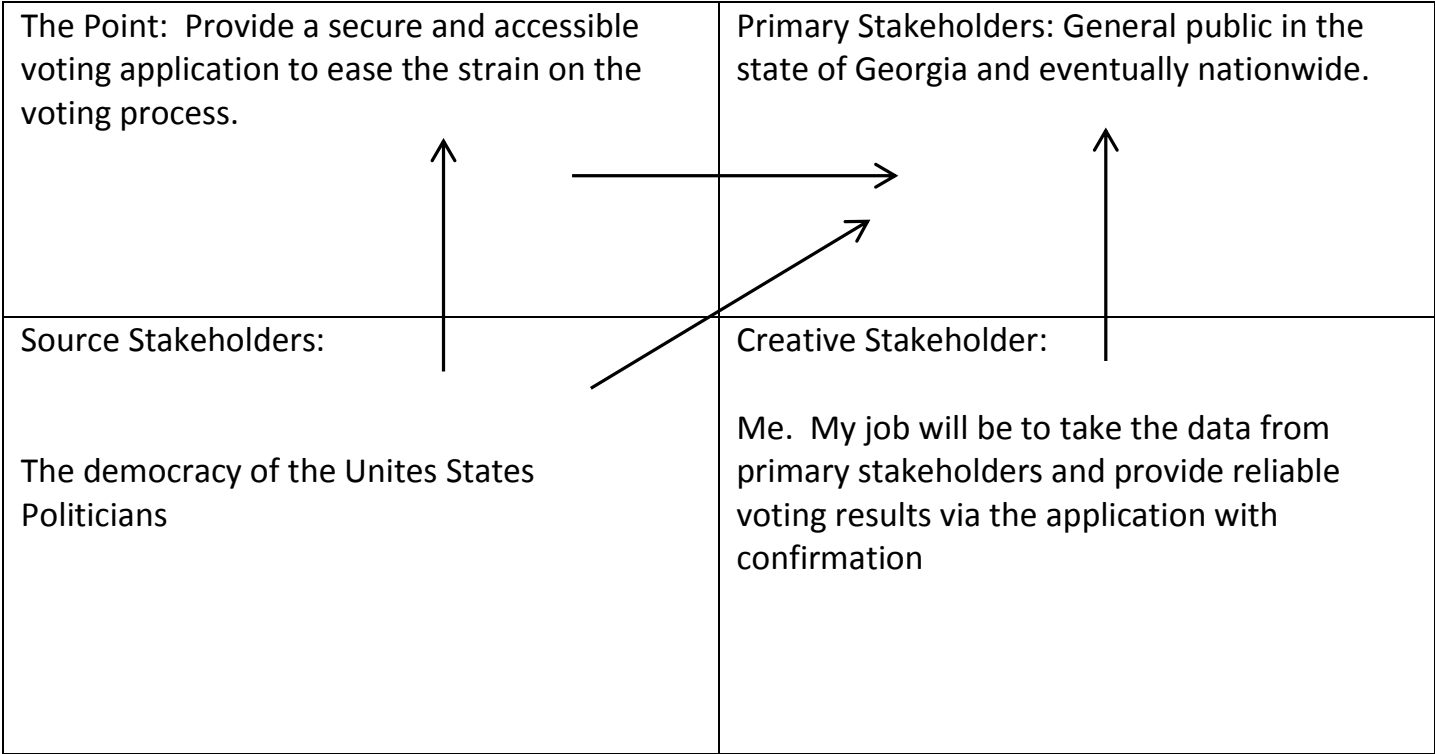|	March 1-7	March 8-14	March 15-21	March 22-28	March 29-April 4	April 5-11	April 12-18	April 19-25	April 26-May 2
Wireframe and Storyboard									
User Consent									
Application Development									
User-Task Analysis/User Voting									
Survey									
Application Updates									
User-Task Analysis/User Voting #2									
Survery #2									
Application Updates #2									
Final User-Task Analysis									
Launch									

Timeline

The timeline for this project will be 8 weeks and 4 days. The project will run from 3/2/2020-5/2/2020. The key timeline areas are listed in the gannt chart above.

Resources

The required resources will be the Mercer INFM server, Textpad application, Adobe XD software, Zoom video conference services, Survey Monkey services, and participation from all stakeholders. Stakeholders include myself as the primary investigator, Dr. Liu as my faculty advisor, and all user participants used for project development. Please refer to the stakeholder map on the next slide for these connections.

Stakeholder Map

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The Point: Provide a secure and accessible voting application to ease the strain on the voting process.	Primary Stakeholders: General public in the state of Georgia and eventually nationwide.
Source Stakeholders: The democracy of the Unites States Politicians	Creative Stakeholder: Me. My job will be to take the data from primary stakeholders and provide reliable voting results via the application with confirmation

System Design

System Design (functions) - Continued

The transformation from Prototype to Application took a huge turn. Once color was added it allowed the application to have a dramatic transformation.
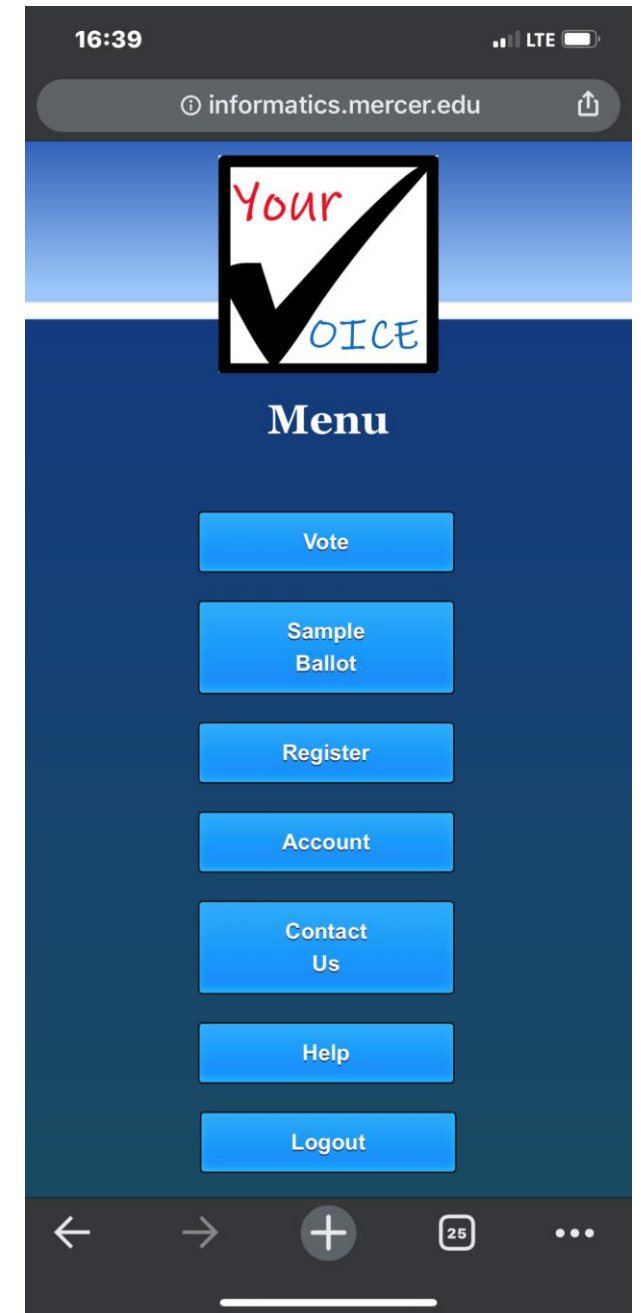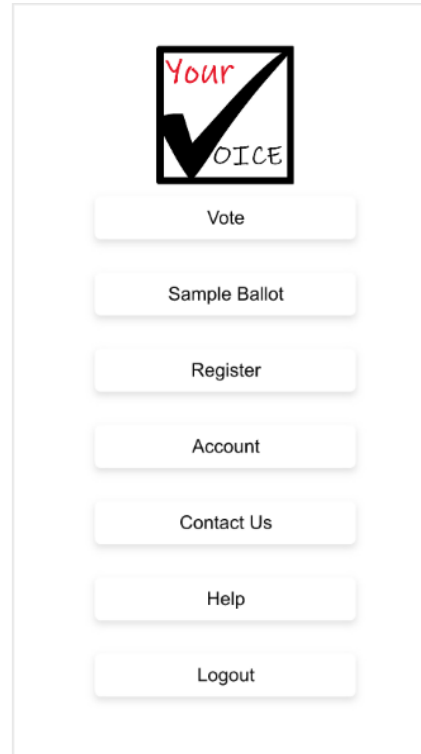
Systems Design - Scenarios

Scenarios were developed to put the application in perspective pertaining to who Your Voice could help.
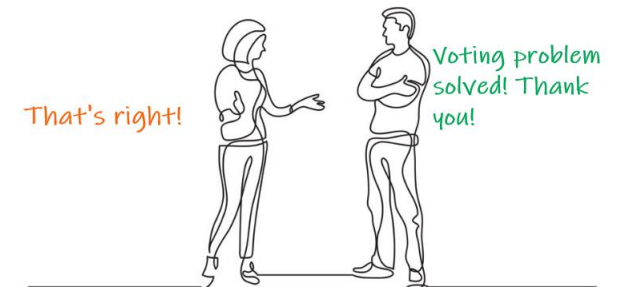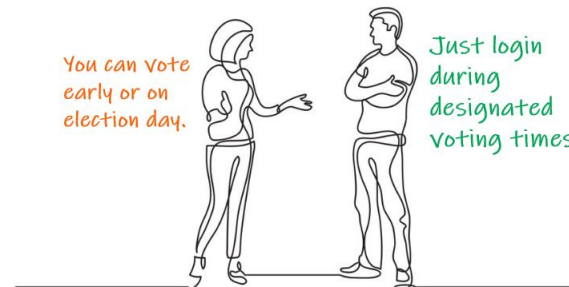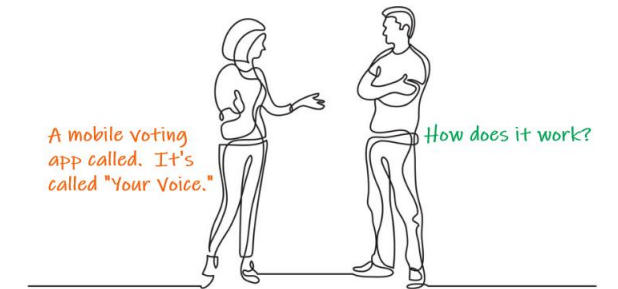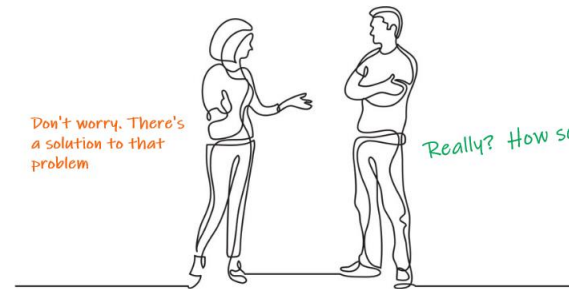
System Development

THE SCENARIO STORY BOARD WAS DEVELOPED USING MICROSOFT WHITEBOARD. THE SCENARIO PROMPTED THE CREATION OF AN APP THAT CAN ASSIST WITH AN EMPLOYEE THAT WORKS DURING PRECINCT VOTING HOURS AND HASN'T TAKEN THE TIME TO FILE A MAIL-IN BALLOT. SKETCHED FIGURES WERE ASSEMBLED AND DIALOGUE BOXES WERE ADDED TO ILLUSTRATE. THIS PRESENTED THE PROBLEM AND THE "YOUR VOICE" APPLICATION AS THE SOLUTION. THE APPLICATION LOGO WAS CREATED USING THIS APPLICATION. THE "YOUR VOICE" PROTOTYPE WAS GENERATED USING ADOBE XD CONSISTING OF 34 TOTAL SLIDES.

Sources

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Conclusion

The user-task analysis presented security as a major concern for launch of the live application on Election Day. The security issue should be addressed with vetted DOD cybersecurity analyst the monitor mobile election results in real-time to ensure the security and safety of the application and Democratic voting process. This is a component of the project that was not able to be addressed in real-time during an actual election.

The Covid-19 pandemic has a severe impact on the time allotted for user/task analysis and data collection. A week was lost due to suspension of classes. Time was also lost due to users who experienced hardships and/or work in healthcare such as myself. Data was thoroughly vetted between users, but more were needed to formulate a more complete analysis for the application. The next phase of this application should initiate another round of user/task analysis with a larger sample group, interview party committee chairmen/women, local politicians, and application developers to finalize a well-established foundation for the "Your Voice" Application. I would once again like to thank the acknowledged parties I recognized above.