

Project Ballot Creator

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Abstract— Third Generation Voting; more specifically, the Prime III software is a very unique and complex entity. This voting system has the potential to accommodate users from all over the world. However, users should be able to fulfill its requirements such as online and offline ballot creation in the comfort of their own home and get real results in real time. Students of the HXR lab at The University of Florida were tasked with the problem of creating a ballot creating system that would not only assist the Prime 3 software, but allow users to fulfill the Prime III software user requirements on their own.[1]

Keywords— Prime 3, Third Generation Voting, The University of Florida

I. INTRODUCTION

The focus point of my DREU experience was the Prime III software. “Prime III was created in 2005 at Clemson University’s Human Centered Computing Lab as the single most accessible electronic voting system. It offers a secure, multimodal electronic voting system that delivers the necessary system security, integrity and user satisfaction safeguards in a user-friendly interface that accommodates all people regardless of ability.”[2][3] Along with two other partners, our objective was to design an online ballot creating system that would accommodate the Prime 3 software.

II. APROACH

The approach taken by my partners and I were to use the user center design approach to create a ballot. During this process we worked separately, but together. As a team, we came together and generated an accurate and agreed upon list of general user and system needs. From there, we split into our own respective works spaces; took our user and system needs lists and requirements and tailored them to our own personal design preferences. From there, each student worked on their own individual wireframes and eventually moved onto creating individual prototypes. After a couple weeks of constructive and consistent user feedback, we merged all three of our prototype ideas according to the strong and weak traits of each design. Example: [Figure 1, Figure 2].

Individual Ballot Design

The wireframe for the Individual Ballot Design is titled "BALLOT CREATOR". It features a central login form with the following elements: a "Login" header, an "Email:" label followed by a text input field, a "Password:" label followed by a text input field, and a "Submit" button. To the right of the login form is a yellow box containing the text "OR" and "Click Below to Continue as Guest" above a "Continue As Guest" button. At the bottom of the login form area, there is a link: "Don't have an account yet? Don't worry, click Here to Sign Up!".

Figure 1.

Merged Ballot Design

The wireframe for the Merged Ballot Design features a vertical navigation menu on the left with the following items: "Home", "Create Ballot", "Settings", "Accessibility", and "Help". The main content area is titled "Prime III Ballot Generator" and contains a "Sign In" form. The form includes a "Username:" label with a text input field, a "Password:" label with a text input field and a "Forgot your password?" link, a "Sign In" button, and a "New to Prime III?" section with a "Create Your Account" button. To the right of the sign-in form is a yellow box containing the text "Or" and "Click below to continue as guest" above a "Continue As Guest" button.

Figure 2.

III. USER AND SYSTEM NEEDS

Establishing the system and user needs was one of the most pivotal points of this project. Though our design process had very few constraints and confined us loosely, to ensure our

designs stayed aligned with our end goal throughout the design process, our lists of user and system needs were very thorough. To establish our system and user needs, we focused on the things that Prime III needs to function and what helped the most with our user needs list was a combination of user personas and [Figure 3],[Figure 4]

User Need List

1. Ballot Templates
2. Text size accommodations
3. Color accommodations
4. Technical ability accommodations
5. Language accommodations
6. Mobile / Desktop accommodations
7. Offline Capability
8. Tutorials
9. FAQ
10. Video Assistance (to help with a process they need help with; how to)

Figure 3.

System Need List

1. Must be able to accept Contests
2. Must be able to accept Parties
3. Must be able accept Candidates
4. Must incorporate pronunciation input
5. Must be able to convert ballot to a file
6. Online capability
7. Downloadable File

Figure 4.

IV. USER FEEDBACK

Individually, some of the tools and resources we used to create our prototypes were Balsamic, PowerPoint, and Invision.

Once our prototypes were complete, we got plenty of feedback from the grad students in our lab as well as the other DREU students in the lab. Individually we probably each had eight different iterations thanks to the bulk of feedback we got.

V. Conclusion

In conclusion, my partners and I were able to design a great looking and efficient product. When implemented, users will finally be able to use the Prime 3 software with little to no interaction with the Prime 3 workers. We believe this new automated process has the potential to set the president for all current and or future voting software and technologies. We have the upmost faith that the HXRL lab at the University of Florida will implement our prototype to the best of their ability.

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