Powershare App Development Technical Report
(Technical Report)

Bridging the Communication Gap: How technology changes the way politicians and constituents communicate.
(STS Research Paper)

An Undergraduate Thesis Portfolio

Presented to the Faculty of the
School of Engineering and Applied Science
University of Virginia, Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

By

Renat Abazov

May 1, 2020

Sociotechnical Synthesis

For my capstone project my team and I worked with a local non-profit, Powershare, to create an app designed to facilitate communication between politicians and their constituents. Over the course of the year we overcame various technical and design challenges to create a finished viable final product. We received a list of requirements from our customer, the founder of Powershare, which outlined the various use cases of the app. The application itself functioned by giving each level of government its own *community* which various residents could then join based on their real life address, for example, joining their local county *community*, or their towns *community*.

The app aimed to fix the problems that Powershare had noticed in the current systems of political discourse. Those being the various distractions found on online platforms as well as the proliferation of bots and outside influences. Things like town halls are limited by those who are available and have the ability to attend such meetings. Internet platforms have the difficulty of not allowing political leaders direct communication with their own residents. This app would serve to fill this void serving almost as a virtual town hall. By facilitating this communication Powershare would create a more cohesive community and allow politicians to better understand the needs of their people.

Working as a team of 5 we split up the various tasks required to fill the demands of our customer. Utilizing powerful tools like google's own pre-existing server infrastructure, and pre

populated civic mapping database, we were able to create an app that would not only meet the needs of our client, but scale into the future as demand increased and more people used the app itself. To maximize reach we designed the app for both android and iPhones ensuring that the most amount of people could actually use the application

For my research paper I looked into how we use existing platforms such as Facebook and Twitter to communicate with politicians, evaluating their effectiveness. In the creation of the app itself we were forced to ask such questions as who would be allowed on the app, and how would we verify who they really are. These questions that we were forced to answer allowed me to better look at the online platforms themselves as a tool for political discourse. There were a variety of factors to consider and research, including who is able to use such platforms and their true purpose. Furthermore as this is a question currently being asked by the public, the government, and the online platforms themselves, I was able to draw from current events and policy changes over the course of the project.

These online tools have become ubiquitous in everyday life, but there are still a lot that we don't fully understand, in terms of its impact on politics. It's difficult to quantify how effective things such as political ads, outside actors attempting to subvert the truth and sow distrust, and genuine communication are on these platforms. Furthermore there is a great deal of opacity in the platforms themselves, as we don't know how they distribute and determine who sees which post.

In my research I also attempt to look into things such as demographics, seeing who is most active on these platforms, who are more trusting of things they read online, who are more tech savvy. These factors play a large role in how we can use online platforms for politicians to reach out. We can see how these platforms can create a partisan divide and limit how effective people can get their message across the political aisle. We also see negative actors trying to unduly influence outcomes. In many ways in my analysis we begin to paint a picture of a system riddled with flaws. However, as a society we are aware of the shortcomings and flaws present on these platforms and are working towards a solution. This is important as it demonstrates that the public is aware there are problems with these platforms and don't place blind faith in a system that has not earned it.

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