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Computer & Information Sciences Department

Accessibility and First Responder Mobile Applications

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Introduction

These applications were designed to meet the requirements provided by the client, First Responder Disability Awareness Training. Their office is located in Timon Hall and they provide excellent resources, for WNY, to make the area more accessible to people with disabilities.

The first application was designed for surveyors to visit restaurants and collect information about how accessible their features are. The organization then takes this data and uses it to rate the restaurant on a scale of “Excellent”, “Good”, “Limited”, or “Not Accessible”. Establishments should benefit by seeing their deficiencies, while consumers can be informed of welcoming locations to dine.

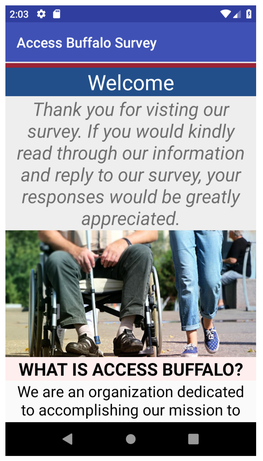
The second application is designed for on site care of a person with a disability. The organization specializes in disability training, and over the years has noticed that a majority of the information is forgotten. This app will be an encyclopedia that can provide swift information about a client, allowing help to be delivered as soon as possible.

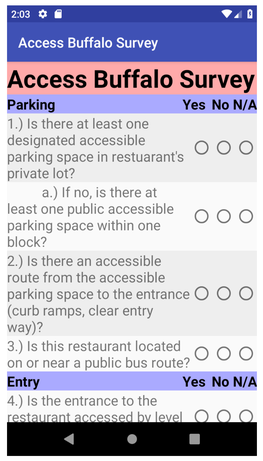
Goals

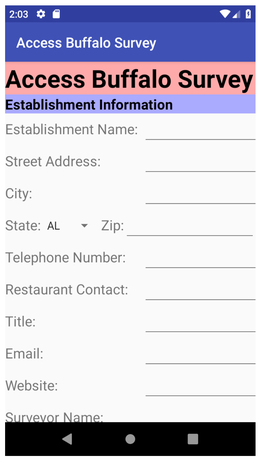
For the Access Buffalo Survey, the goal was to make an application that allowed surveyors to easily compile the onsite information they recorded about accessibility features in local restaurants. This application also needs to organize this information so that the First Responder Disability Awareness Training organization can collect this information. The goal of this application is to remove the concern for families, who have a person with a disability with them, to meet the needs of their loved one while dining.

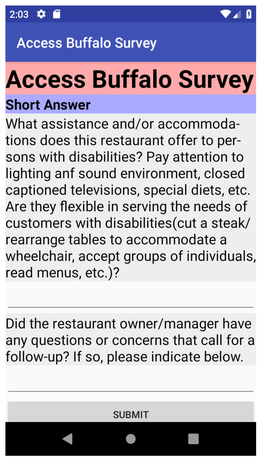
The second application should meet the goal of being usable on emergency sites and providing quick, accurate information in helping to save or understand a person with a disability. Another goal is to help aid the emergency responders in memorizing the information to deal with a disability. Hopes are that the more a responder uses the guidebook, the more he commits to memory. Having this information being a stable in the emergency rescue field will be beneficial for not only the responder but also the accommodation available for people with a disability.

Think → Design → Develop









Supported by:
✓ First Responder Disability Awareness Training
✓ Access Buffalo

Creative Thinking Creative Learning

Design and Development

The design process is crucial for both of these applications. The survey app needed to be easily digestible by the surveyor. This is prudent so that information is placed in the correct location and therefore stored and recorded properly. When dealing with a lot of user entered data, it is more efficient to provide a natural design that gradually pushes the surveyor along until the end. Those who are interested in collecting this data, also require a well formatted and easy to read presentation of the answers. To provide that, the Android capability of Saved Preferences was used to save the data, which was then converted into a file and sent to the organization collecting the information.

For the first responder application, design is a big concern of mine. Not only does the information need to be accessed immediately but it also needs to be accurately sorted. When first responders are using the application in the field, they need an app that can present them with relevant information as fast as possible. As for design, I am including a search bar to the list of disabilities that the first responder may need aid with. For development, first responders will have access to a short test that can narrow their search down to a select few disabilities based on visual observations. These two design choices are allowing the application to the meet the requirements of its main audience.

Future Work

This project consists of the design and development of two mobile applications. Only one application is ready to be used in a real life setting while the other is still in the process of development. The future work that needs to be done on the first responder app is creating a dynamic list of disabilities that changes based on the occupation of the user. For example, a firefighter has different guidelines to handle a situation than a police officer.

The app also needs a search bar developed at the very top of the list. Allowing on site emergencies to be easily handled by searching the disability and follow the instructions listed.

The last feature of development will be the disability recognition test. Users will be able to take a short quiz of different visual clues in order to narrow the disability down to a potential group. This test needs to be as accurate as possible while also not sacrificing speed. Designing for those two constraints is a difficult process because typically they contradict each other.

Both applications are envisioned to be out in the field providing a more safe and accessible environment for people with disabilities.