

2H: FINAL REPORT
CSE 440 Intro to HCI / AU 18
Arjun, Jingle, Melissa, Payton

VETERIST

Roles

Arjun: Interviewer, Prototyping, Writer

Jingle: Interviewer, Writing

Melissa: Interviewer, Design Lead

Payton: Project Manager

Problem Solution and Overview

We are trying to tackle the problem of helping veterans with PTSD gain access to the appropriate resources that best address their needs. Veterans returning from service have access to a variety of resources, including the V.A. office and various non-profit organizations. These resources are well-equipped to handle the different problems veterans with PTSD deal with, however some resources are more effective than others at addressing specific problems.

Veterist is a mobile application that aims to connect veterans with the resource that is best able to address their specific problems. Veteraist is a combination of the two words Veterans and Assist and symbolizes our app's purpose: To help veterans with PTSD and provide assistance to them when needed. This assistance includes helping them connect to different support groups and providing support on demand.

Goals

Our major goal when conducting our design research was to get a better understanding for the problems veterans face after coming back from active duty. To this end, we sought out and scheduled interviews with two veterans - one who had been diagnosed with PTSD, and one who had not. We hoped to get an understanding of what the experience was like for veterans both with and without PTSD, and see if the struggles were drastically different or if there was some overlap. We believed that interviews would be the best way to gather this information, as they would allow us to conduct our discussions with a set of questions to answer, while also allowing us the freedom to dive deeper into any interesting points that our participants brought up.

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Stakeholders

Veterans with PTSD: As the target audience for our solution, veterans with PTSD are our main stakeholders. Our goal is to help these veterans get connected with the resources that best address their particular struggles once they have returned from active duty.

Organizations that support veterans with PTSD: In order to support veterans with PTSD, we aim to connect them with resources that are best able to support their needs. Due to this, those resources are our second main stakeholders, since our solution can help them better help veterans.

Participants

Our interview participants were both retired veterans who went through past wars. Since we have an extremely diverse user group in terms of ages, experiences during wars, occupations after being discharged, and so on, our interview questions were not only about the participants themselves, but also about their comrades and friends. Participants were asked to talk about what they went through during wars, how war experiences have impacted their lives, what resources they have as veterans, and symptoms of PTSD. Jim, a World War II veteran without PTSD, talked about his personal experiences and financial and medical resources provided by the government. In particular, he told us a couple of stories that stuck out. One was about when he went to the Veteran Administration for support, as he had heard he could receive a pension due to being injured in the war - however, the Administration determined he did not qualify for this support. He also told us about the injuries he sustained during the war, and how the shrapnel he received from it was never removed during his time in the military - he had to get it removed himself when he started to notice it over 50 years later. Dave, a veteran chaplain diagnosed with PTSD who is working in an organization that supports veterans with PTSD, focused on the culture within the veteran community and the pros and cons of different support programs. He brought up how the culture of masculinity and use of alcohol can hinder veterans from getting diagnosed, due to mental health issues being considered a stigma. He also told us about how people in the VA fail to provide good support for veterans with PTSD - while the assistants are well-educated, their lack of actual combat experience makes it difficult for them to relate to veterans who have been through war and seen its horrors. This leads to veterans feeling as though they are being done a disservice, as they cannot connect with the people that are supposed to help them.

We are looking for one more participant to gain personal insights of how veterans with PTSD deal with the symptoms and the process of them seeking resources and communicating with each other. We have put up an interview protocol (see Appendix 1).

Common Themes, Problems, and Practices

In our interviews with both Jim and Dave, we noticed a few common themes.

- 1. Veterans, much more than other individuals, face the questions of life and death far more directly than others.** While this is not surprising given the nature of war, veterans' direct exposure to it likely plays a significant role in the development of PTSD.
- 2. PTSD can have lasting effects on veterans.** Dave in particular spoke to this point, describing the symptoms of PTSD in veterans' everyday lives. Similarly, Jim's story about diving under a table because of a door slamming shows that even veterans who don't believe they have PTSD are affected by their experiences in war, and that effect intrudes into their daily lives.
- 3. Veterans experience a severe decrease in support once discharged from active duty.** Jim's story about his injuries and having to discover and take care of them on his own speaks to this clearly - the veteran was not even made aware of the fact that the shrapnel was still in his body. Dave also noted that while active-duty soldiers have commanders, medics, and chaplains who can keep an eye on them, discharged soldiers receive far less direct support - they do not have this network of individuals around to support them any longer.
- 4. Non-veterans have an incredibly difficult time understanding veterans' experiences at war.** Dave noted this directly in the context of soldiers seeking counseling from the VA and being met with individuals who, while trained for their role, cannot relate to the veterans and the things they have seen at war - causing the veterans to feel like they are being disserved. While Jim did not directly mention this idea, some of the events he talked about with us really drive this point home when we stop and think about it - the things that veterans have seen during war can truly be horrendous, and even hearing about the experiences is entirely different from actually going through it.

As we moved through the process, we decided to focus most explicitly on connecting veterans with the resources that are best able to support them. We feel that this addresses the main themes above: By finding the best resources for these veterans, we can connect them with people who understand the issues they are facing and can best support them.

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Task Analysis Questions

- 1. Who is going to use the design?** The plan is for the design to be used by veterans with PTSD - specifically, ones with access to smartphones. Part of the focus on veterans, and even the definition of the term itself, is that these people are no longer in active service to the military. It sounds like while active-duty soldiers receive a fair amount of support from specific resources around them, veterans and other non-active-duty persons face a significant reduction in available resources.
- 2. What tasks do they now perform?** The main task performed by veterans with PTSD is finding the appropriate support for their problems. It seems that the various organizations that exist to support veterans each have a particular area of effectiveness, but the number of options may make it difficult to find the correct one. Furthermore, the specific support they receive once out of active duty is severely less than what they received during service - particularly with individuals like commanders, medics, and chaplains looking over them.
- 3. What tasks are desired?** Based on our interviews, we think the following tasks are still desired: better support for veterans not in active duty, access to forms of therapy with other veterans, and resources to address life and death questions.
- 4. How are the tasks learned?** Presumably, veterans learn these tasks through advice from their commander or medical troops during active service, and from other veterans who have been through the process once discharged. However, this learning process seems to be more limited for veterans not in active duty.
- 5. Where are the tasks performed?** Since our solution would be a mobile app, it can support tasks to be performed in various places like home and offices.
- 6. What is the relationship between the person and data?** For veterans with PTSD, the main data associated with them would be their medical records - in particular, diagnoses. Their profile and past experiences would also be used to guide them to the right resources. Other information would be the resources available to veterans- which ones they have been to, which ones work, and which are less effective.
- 7. What other tools does the person have?** Due to our decision to focus on a mobile application, we have necessarily limited our scope to veterans with access to a smartphone. Veterans with smartphones would have access to the internet and their personal contacts, both of which could help them find support.

Task Analysis Questions (Continued)

8. **How do people communicate with each other?** Communication between the people involved is definitely varied. For veterans with PTSD, many communicate with each other through support groups - the Veterans of Foreign Wars group is one such example. However, some veterans are unable to reach out in this capacity - for them, the biggest resources are support organizations like Dave's that are constantly on the lookout for these more vulnerable populations. With our solution, veterans can communicate with each other or organizations via the platform. They can also find phone numbers and addresses of different resources on the platform.

9. **How often are the tasks performed?** Depending on the task, we think they could be performed anywhere from daily to yearly. For example, communicating with other veterans could be performed daily but searching for new resources could be performed yearly. We hope to get more insight into this question in another interview.

10. **What are the time constraints on the tasks?** Time constraints are different for different people. For some veterans with PTSD, there is a very immediate concern of suicide, prompting the need for near-immediate responsiveness. For others, the symptoms may be less pressing or urgent, and the time constraints could just be needed to schedule around other commitments like work.

11. **What happens when things go wrong?** In the absolute worst case, people die - approximately 20 veterans commit suicide daily due to their struggles with PTSD or other problems. Another thing that could go wrong would be unauthorized access to data - not only is this data personal, it relates to a highly vulnerable population.

Proposed Design Sketches

Design 1 - Task Specific Portable Device

Our first design was a device made specifically to accomplish our desired tasks. This device would be small and portable, akin to an old flip phone. The screen would be divided into four sections, with four buttons below that corresponded to each section. These buttons would allow users to navigate through the different tasks, as shown in Figures 1 and 2. Figure 3 explained how a veteran support organization would receive the information needed to reach out to veterans. As a whole, this device was made to provide support to veterans on demand. Ultimately this design was scrapped due to feasibility: the feedback we received from other groups was that creating a specific device that supported the same tasks as a smartphone app would be needlessly complicated.

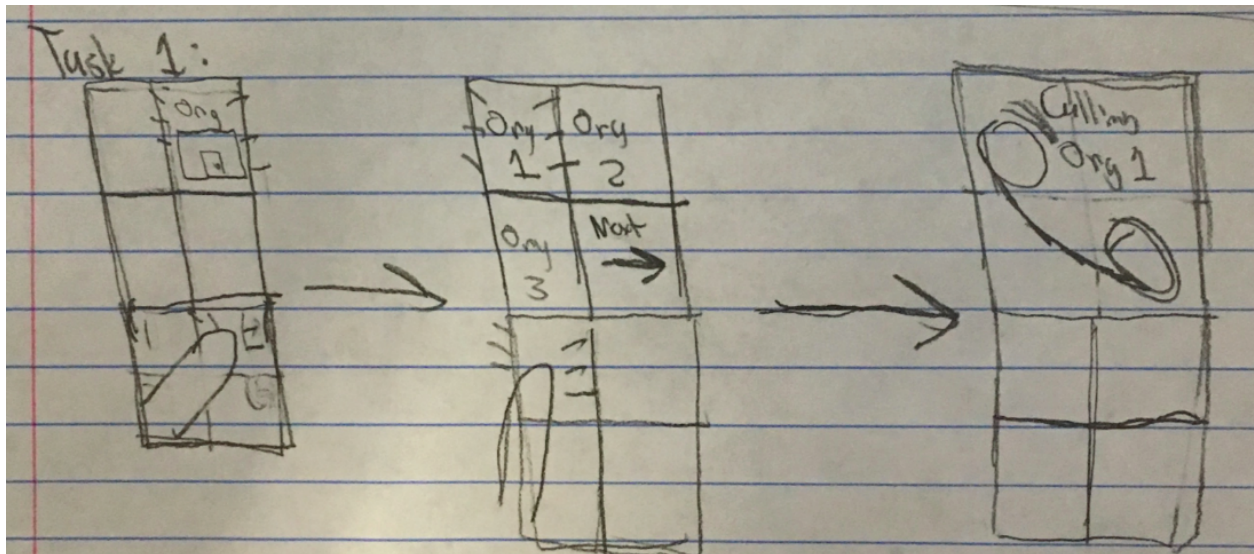


Figure 1: Using the device to contact organizations

Proposed Design Sketches

Design 1 - Task Specific Portable Device (Continued)

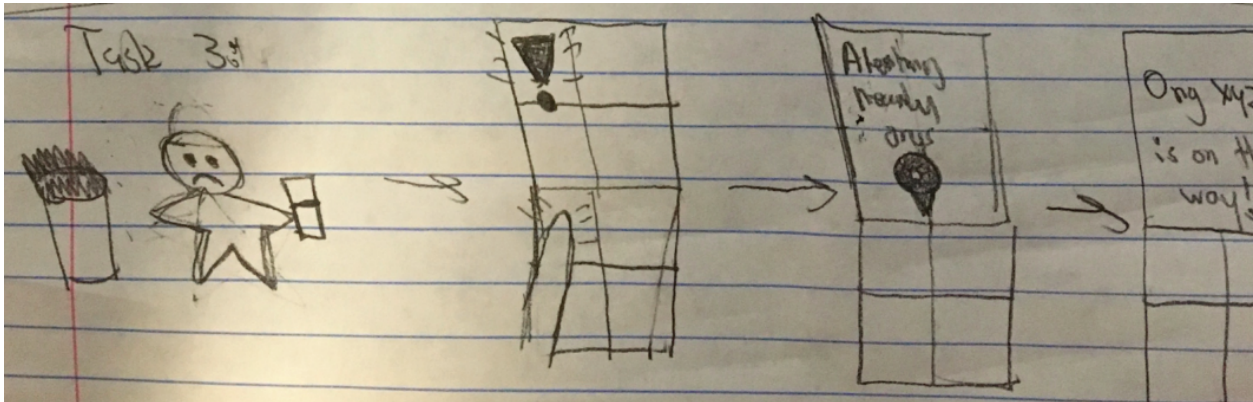


Figure 2: Homeless veteran getting in contact with nearby organizations for immediate assistance

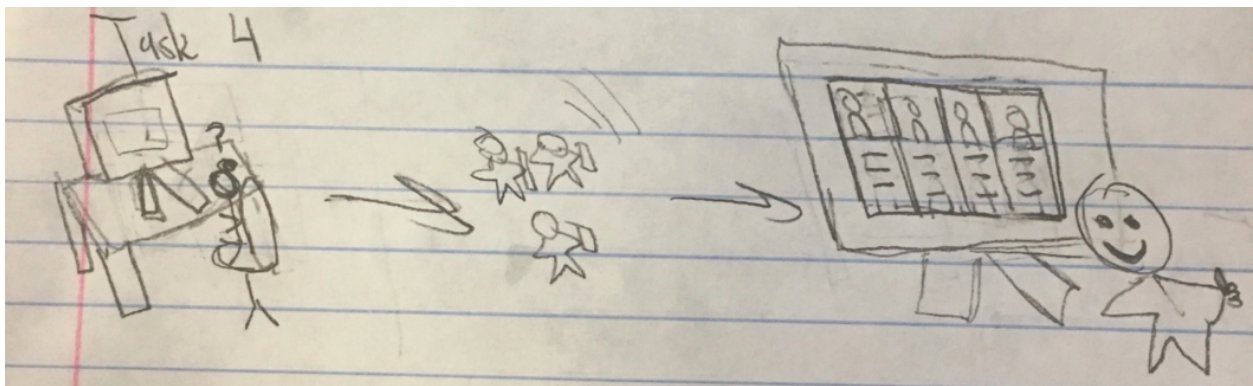


Figure 3: Veteran aid resource receiving information for veterans who need help

Proposed Design Sketches

Design 2 - Mobile Application

Our second design was a mobile application. This application would support tasks similar to the first design, however with a different layout and flow due to the nature of mobile devices. A "Profile" tab allows users to input information about themselves - specifically, the problems for which they need support. A "Support" tab helps veterans get in contact with both long-term and on-demand resources, helping them find the best solutions for their needs (Figures 4, 5, and 6). A "Logs" tab serves as a scheduler, allowing users to schedule meetings with organizations or other support groups and track them. Consistently attending these scheduled meetings would award veterans with "stars", giving them a form of motivation to continue attending meetings (Figure 7).

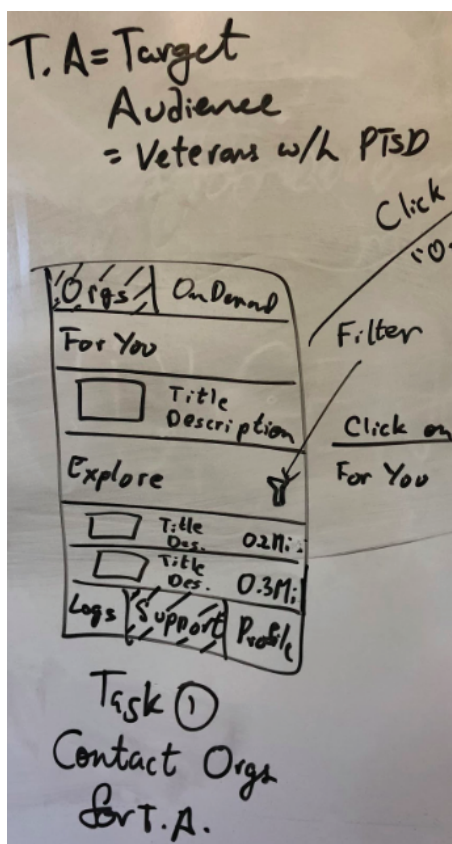


Figure 4: Support Home Screen

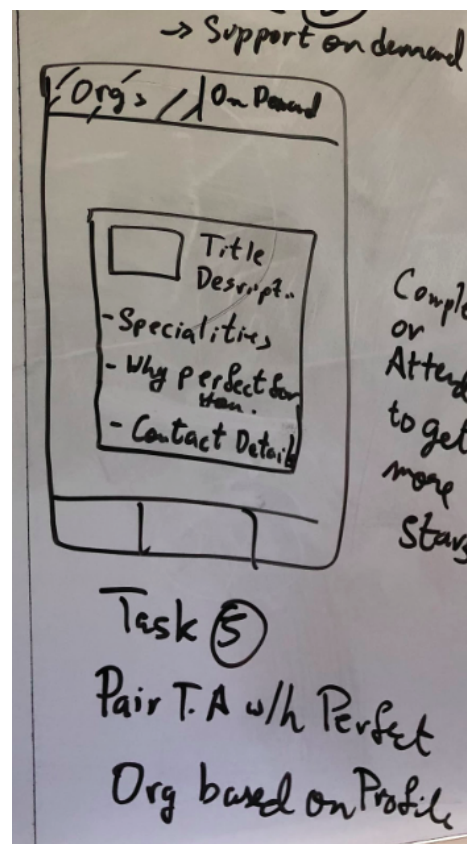


Figure 5: Organization Details

Proposed Design Sketches

Design 2 - Mobile Application (Continued)

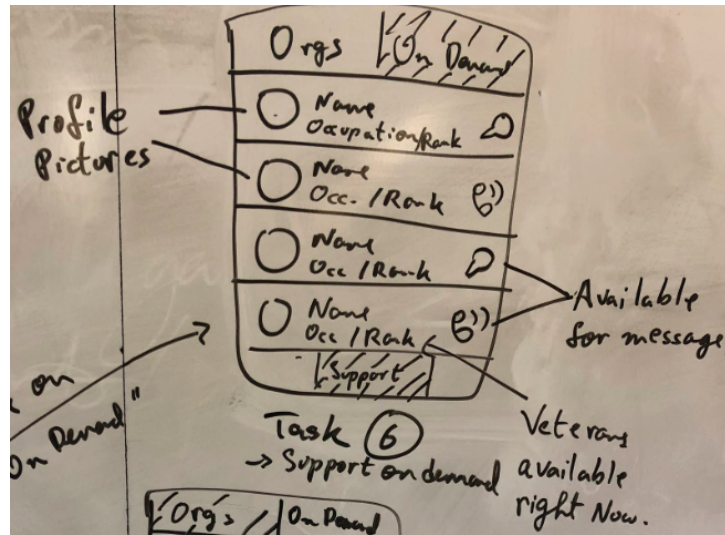


Figure 6: On Demand page

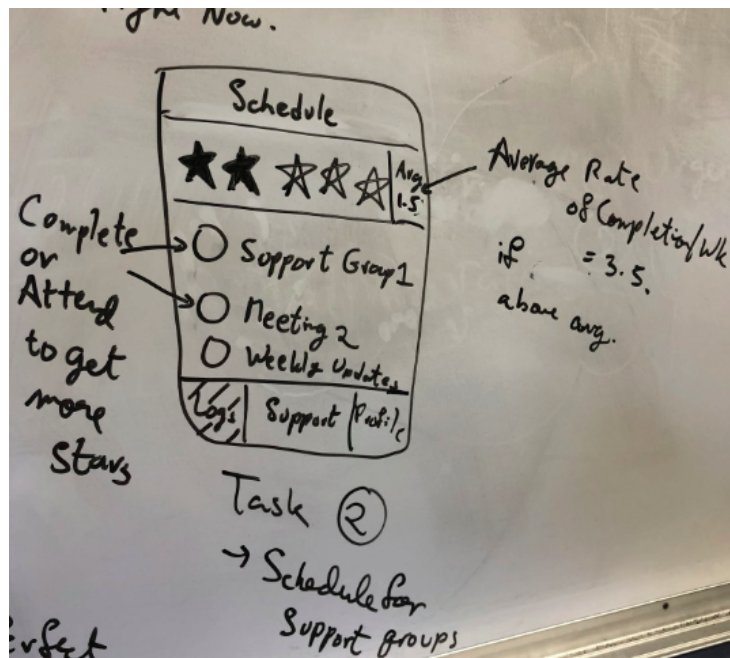


Figure 7: Scheduler Feature

Proposed Design Sketches

Design 3 - VetBus

Our final design was the VetBus - a rolling supply vehicle for veterans in need. The bus would drive on a set route, meeting with veterans in the area and providing supplies and support (Figure 8). The bus would be able to divert to veterans with severe symptoms of PTSD who called it, driving out to their homes to provide support (Figure 9). VetBus could also serve as a lookout for homeless veterans, providing them with supplies and getting them in contact with local resources to support them (Figure 10).

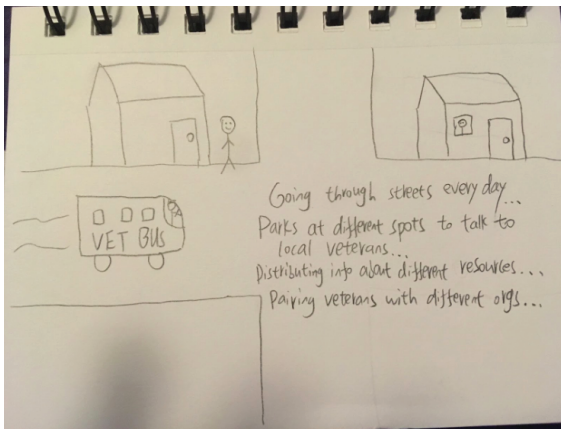


Figure 8: The VetBus driving on its route

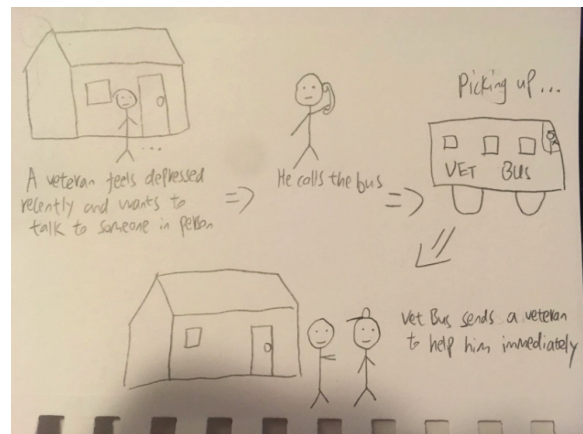


Figure 9: Diverting to veteran with PTSD

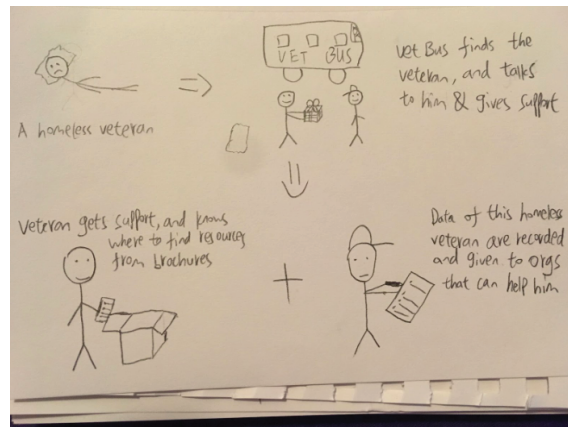


Figure 10: Finding and helping homeless veterans

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Proposed Design Sketches

Conclusion

We decided to go with a mobile app design because it is the most cost-effective and accessible of our possible designs. With the mobile app, we decided to support two main tasks: helping veterans find the best resource for their situation, and getting veterans on-demand support when they need it. By connecting veterans to the best resource for their situation, we are able to help them address the long-term risks associated with PTSD. By providing them on-demand support when they need it, we can help mitigate the most immediate symptoms that may be plaguing them.

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Written Scenarios

Our first scenario (Figure 11) illustrates an important use case of the app which is providing support on demand to veterans with PTSD. In this scenario our user is Sarah, a veteran with PTSD, who needs immediate help with her symptoms. It's late at night and Sarah doesn't want to disturb her family or call her friends to reach out for help. In scenarios like these, Sarah uses Veterist, our mobile app designed to assist veterans in need. Sarah launches the app on her phone, and immediately clicks on the tab with the exclamation point icon. Sarah then sees a list of user profiles that she can message or get on call with for immediate support. The user profiles are of people from a support organization who are trained to help veterans with PTSD. Sarah then decides to call Jack and the app connects Jack to her. Now, Sarah can talk to a trusted resource and gets immediate help to alleviate her symptoms. Once the call ends she also has the option to give a private rating to the caller. This private rating is then recorded by the app and helps in prioritizing the list of users profiles to show Sarah the next time she clicks on this tab. The app prioritizes the user profiles by showing the highest privately rated profiles first to Sarah.

Our second scenario (Figure 12) illustrates another use case of the app which is to connect veterans with PTSD to support organizations in their community. In this scenario our user is Tom, a veteran with PTSD, who is looking for support to aid his PTSD suffering. Tom downloads the Veterist mobile app on his smartphone and creates a profile, listing the most relevant symptoms to his condition. Once Tom finishes entering his symptoms, the app will find support organizations in his city that help people like Tom suffering from PTSD. The app not only lists all the support organizations in the city that can help Tom, but also recommends support organizations that Tom might be most likely to benefit from. The app can recommend these organizations based on the Tom's profile and symptoms. This saves Tom the trouble of going through every support organization and finding the one that best suits his needs. Tom can then select the support organization that he would like to get in touch with and a mini profile card is popped up. This mini profile card contains more information about the support organization and an option to call the support organization to learn more about them. Tom proceeds with giving a call to the support organization of his choice and is connected to best resource, helping him combat PTSD.

Written Scenarios

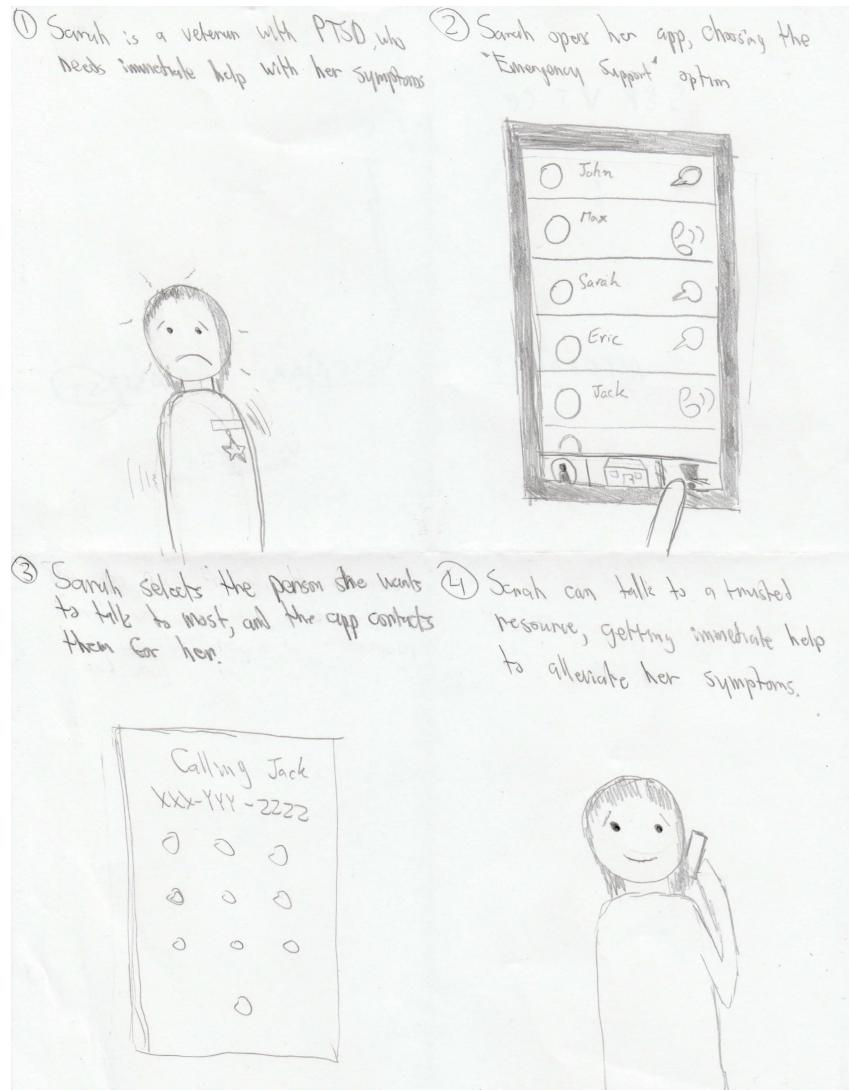


Figure 11

Written Scenarios

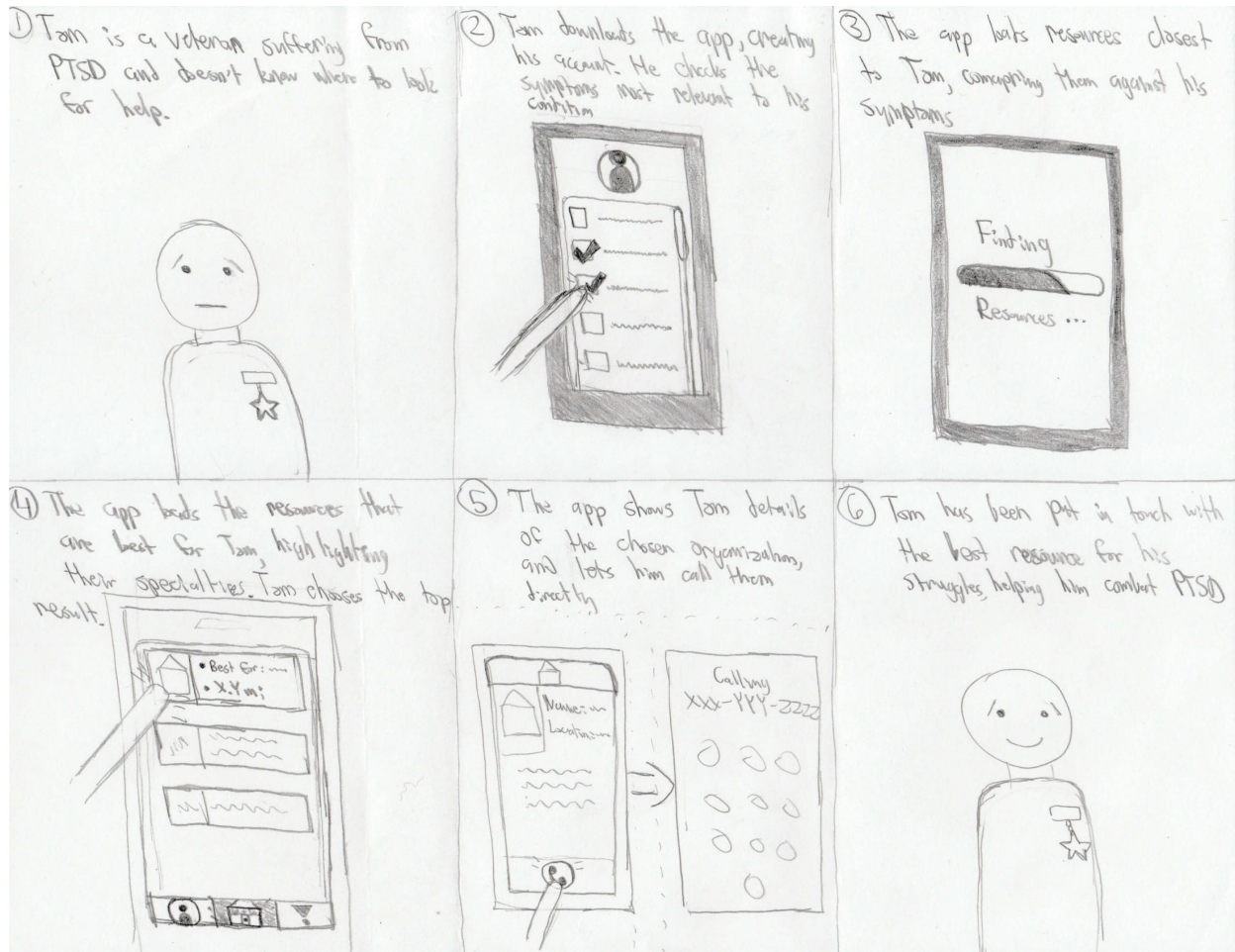


Figure 12

Appendix 1: Interview Protocol for Potential Third Interviewee

After our first two interviews, we feel like we have a reasonable understanding of the experience of veterans in general (from our conversation with Jim) and of the potential resources and organizations available to veterans with PTSD (from our conversation with Dave). However, while Dave himself is a veteran with PTSD, our conversation did not focus on his own experiences as a veteran but more on his work. That being said, we think that we need to speak to a veteran with PTSD about his or her own experiences dealing with PTSD, the process of seeking resources, and what resources are most effective. Currently, we think we need more insight into what tasks are desired, how the tasks are learned, and how they communicate with each other. We think we could gain a deeper understanding of these tasks by asking questions like the following:

1. How do you begin to search for a resource given a PTSD related issue or symptom you might be facing?
2. What resources are the easiest to access? What are the most difficult?
3. What factors discourage you from seeking potential resources?
4. Have you found that over time you are able to learn how to navigate certain systems for help? If so, how did you learn this?
5. (If not active duty) How did your experience as a veteran change after no longer being active duty? Did this affect your PTSD or your access to potential resources?
6. What resources would you like to see that do not currently exist?
7. Do you seek out other veterans with similar experiences? How do you find other veterans to talk to?
8. How have your friends and family supported you after you returned from combat?