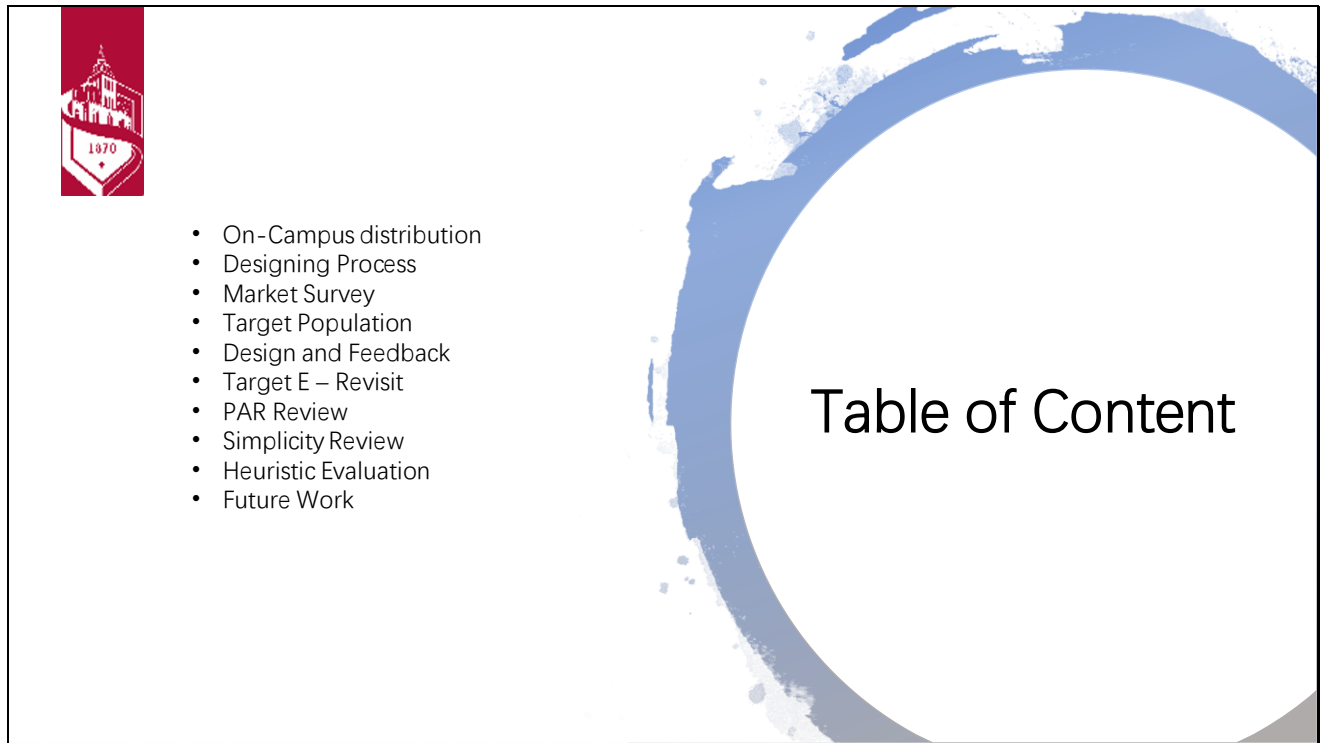
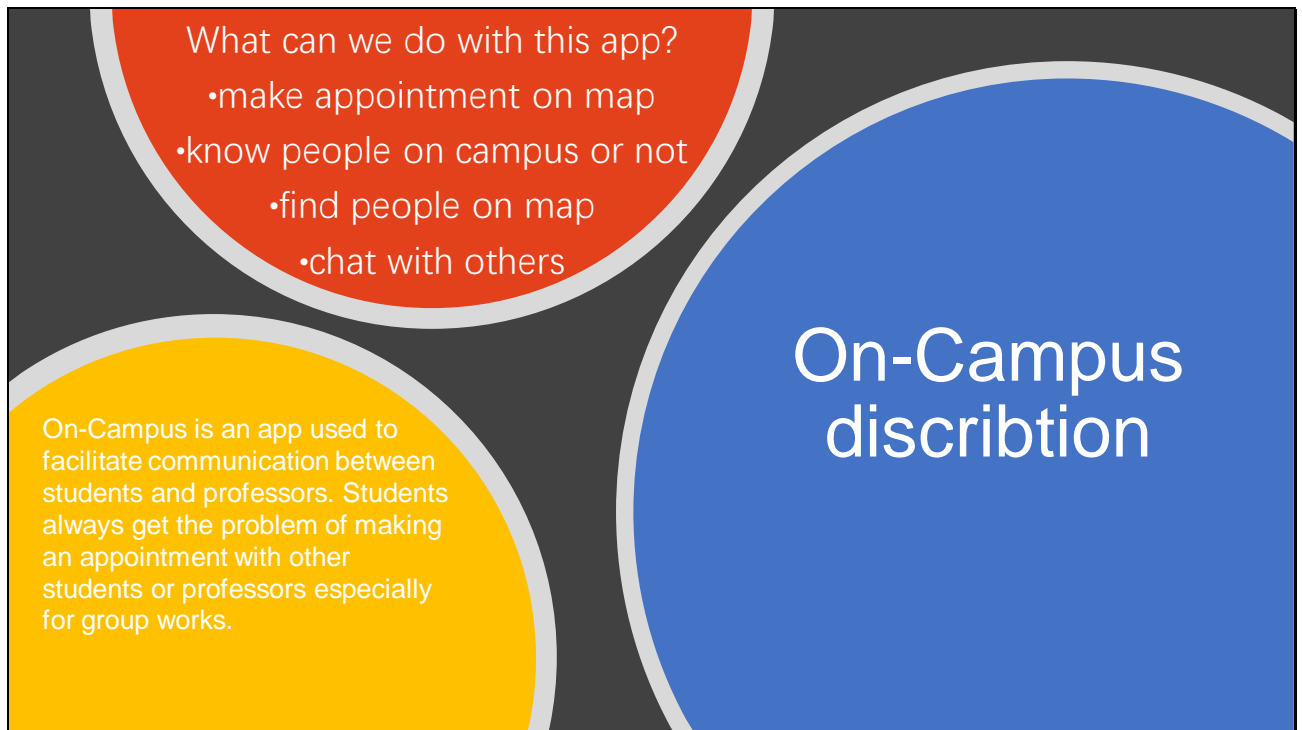




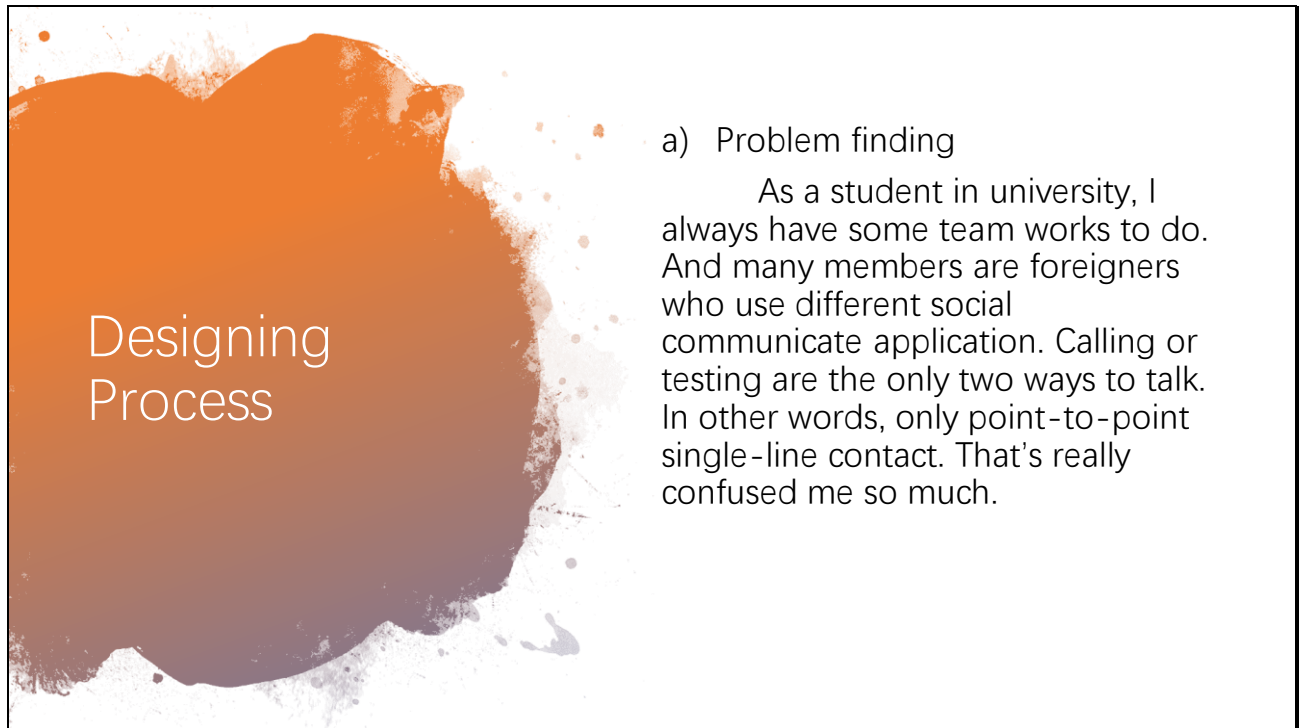
Our project name is On-Campus. It is an application which can help students and professors chat and make appointment for their team project or works. It will effectively improve group work efficiency and save valuable time for students and professors.



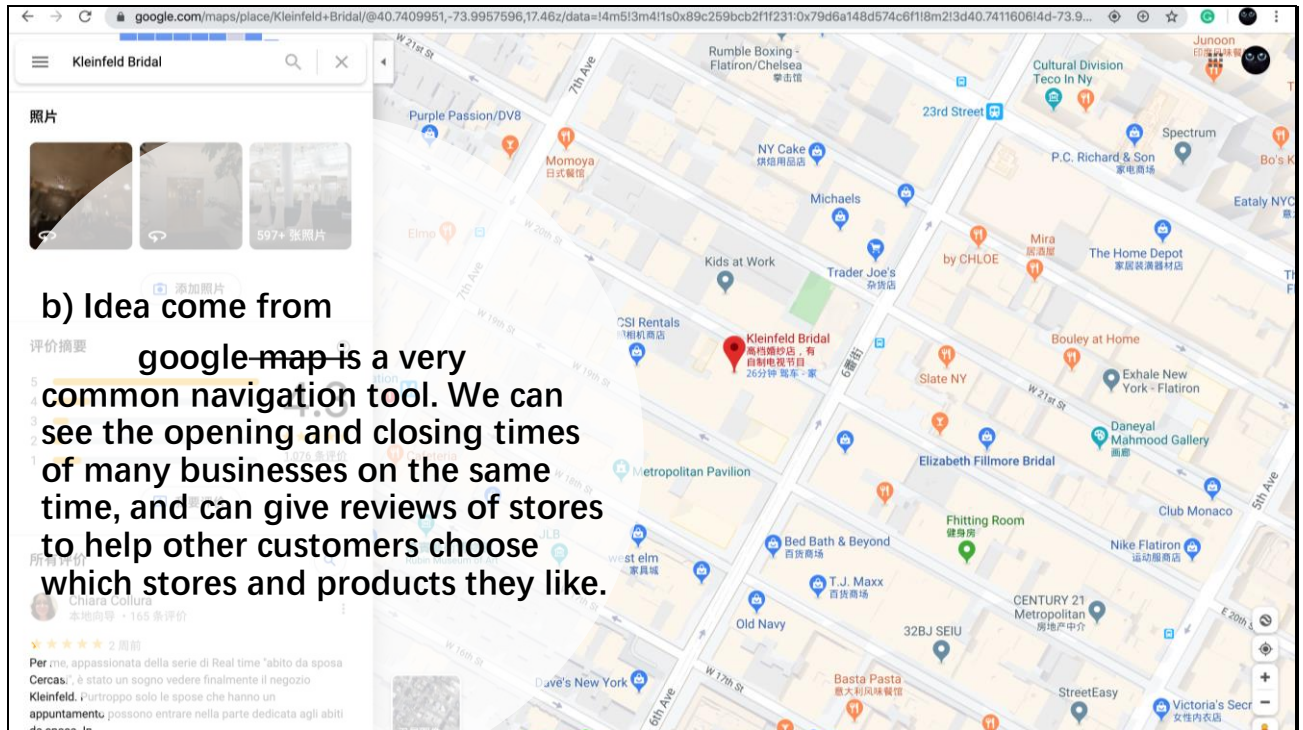
In this presentation, we will introduce the follow parts. We will show you the outline, design process, market research and several reviews base on Human-computer interaction to Demonstrate the value of this application in practical applications.



First above, On-Campus is a very useful application for students and professors to communicate on campus. People can use this app to chat and to make appointment with each other. They can find other's location and schedule their team meeting easily on the map. The idea comes from the problems I often encounter in daily life



This is my real experience in my daily life. I'm graduate student in SIT. And there are many team works to do. So Group meetings are my daily routine. Scheduling them is a hard work. Most team members are from different countries, they use different social apps like Facebook, WeChat and WhatsApp. The only common way to chat is text. That is a very primitive point-to-point single line contact method. We also try to contact each other by email. But not everyone can even check the message and reply. And each of us has more than one group of work. Too much mail is a mess in our schedule. I think this is not just a problem that I encountered alone.



One day, when I opened the Google map to view the restaurant I wanted to go to, I found out that it provided the opening and closing times of the restaurant and the experiences and comments of customers. This information provided me with a lot of references to decide which restaurant to go to. The restaurant's business hours also allow me to better organize my schedule so I don't miss their working hours. At this time, I thought, if there is a software that can provide the location and free time of the rest of us, can it solve the problem of poor scheduling of the group meeting I encountered



The function of group chat in daily social software is also a good idea. If it can be integrated with the map, we can get a very convenient group meeting scheduling software. This is the idea we formed in the early days.

Market Survey

In survey, We use these questions to assess the universality of the problem. To assess the market significance of implementing this project

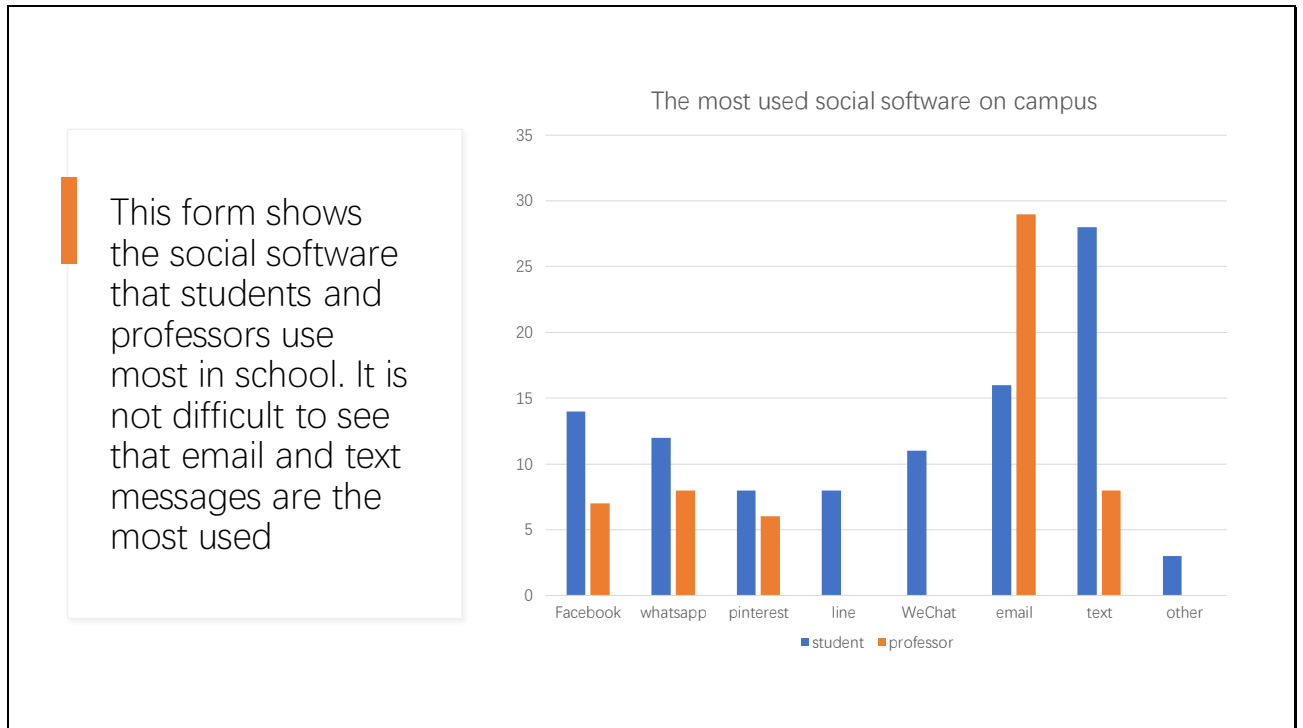
MarBook Pro

Questionnaire for On-Campus

(Please answer the following questions truthfully, thank you for your cooperation.)

- The social application you most like to use at school:
☒ Facebook ☐ Whats up ☐ Pinterest ☐ line ☐ WeChat
☐ E-mail ☐ text massage ☐ others
- What is the most frequently use application for your group to set a meeting?
☐ Facebook ☐ Whats up ☐ Pinterest ☐ line ☐ WeChat
☐ E-mail ☒ text massage ☐ others
- Is that easy to find the people you want or your groupmates to have a meeting in campus?
 Yes ☒ No ☐
- If an app can help you find people and set a point on campus map to make an appointment, would you like to use it?
 Yes ☒ No ☐

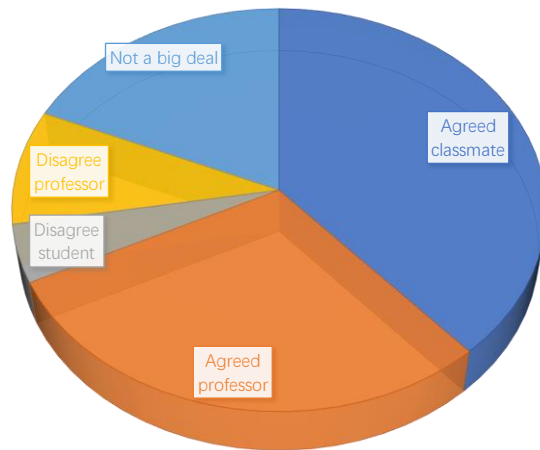
Later, we plan to collect data using a questionnaire. Use it to assess the severity and generality of the problem. After all, this problem is just my experience and it does not represent everyone's situation. To this end, we designed a questionnaire. These include the most commonly used social software in schools, the software most often discussed with group students, and whether this problem causes inconvenience to life.



In this questionnaire, we surveyed many people in the school, including professors, undergraduates and graduate students. This picture shows the social software they use for school communication. As I expected, apart from email and text messages, there is no universal social software

Obviously, most people think that this problem causes them great trouble. Therefore, our topic is meaningful and it can really help many people.

DOES THIS PROBLEM AFFECT YOU



This picture shows that students and professors are too concerned about this problem, and most people think that it really affects their lives. Some people think this is a problem but has little impact on life. There are very few people who think this is not a problem for them.

Name: Rui Wan
Age: 25
Marital status: Single
Occupation: Student

Excerpt from Persona Document

Rui Wan is a 25-year-old graduate student in computer science. He has many courses and many of them need to complete difficult group projects. He has various group meetings every week, with different group members for different courses, and most of them come from different countries. Scheduling group discussions is a headache for them.

He has classes almost every day. He was out of breath with homework and lessons. Scheduling meeting drained even his spare time.



It was a classmate's personal experience, and in his story I found the same problem as I mentioned. Coupled with data from previous questionnaires, we can confirm the universality of this problem.

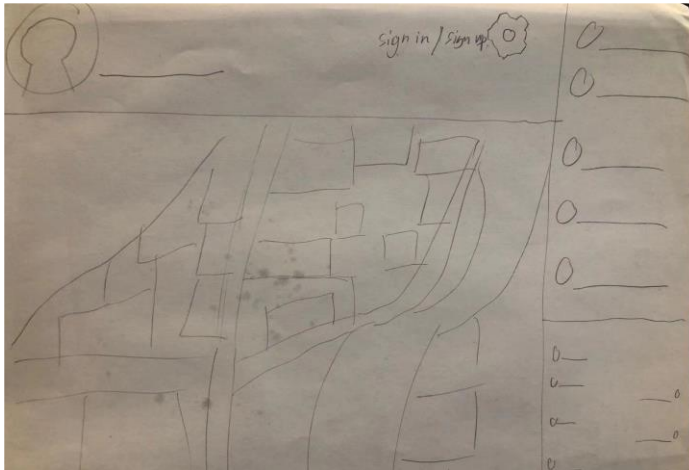
Target Population

- Our target group is mainly people in school, including students and professors. At the same time, we restricted the area to our school. This will help improve service effectiveness and efficiency.



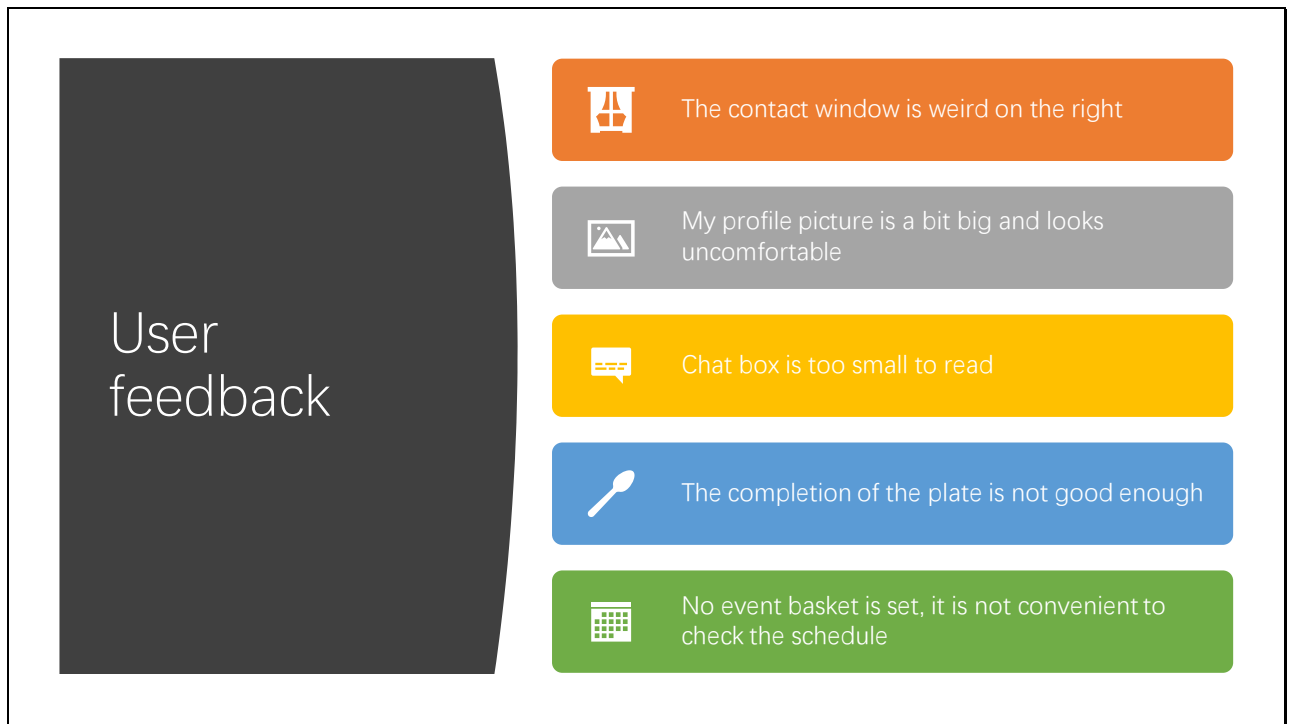
Since our problems mainly occur among students and professors, I think the target group of this software should be students and professors in the school. Most group work should take place in a school building or library, so we lock the map within the school. This will help reduce the amount of data, reduce server pressure, and improve service quality and effectiveness.

First Design



- This is the first design of the application. I put chat and map together. But But there are many flaws.

This is our first design. The idea is to combine maps and chat. So, maps, contacts, and chat boxes appear in our interface. In the upper area of the map, we also designed the user avatar section, the login button and settings. Users can select contacts to chat, click the map to add coordinates to set the meeting place



Through discussions with the surrounding classmates, we got some feedback. They mentioned that placing contacts and chat boxes on the right looked weird. This is not in line with common usage habits. In addition, they think the chat box is a bit small and inconvenient to read. Another classmate thought we should add a time list. Convenient to see the schedule for the day.


Second Design

- Improvement:
- Place the contact box to the left
- Enlarge the chat box and place it at the bottom of the map, in line with the habits of most people
- Add event button to view existing schedule
- Add a sign next to a contact to show if the person is in school




After hearing the opinions of the students, we made some improvements. Based on user habits, we have placed the contact list on the far left, added switchable windows, and added group and event list options. The chat window is also enlarged to make it easier for users to read chat messages. The contact list also shows whether the contact is currently in school. Of course, this version of the interface still has a lot of room for improvement.


User Feedback



Event list and contact box cannot be displayed at the same time, which is inconvenient for viewing at the same time



Signs showing whether those are in school violate personal privacy



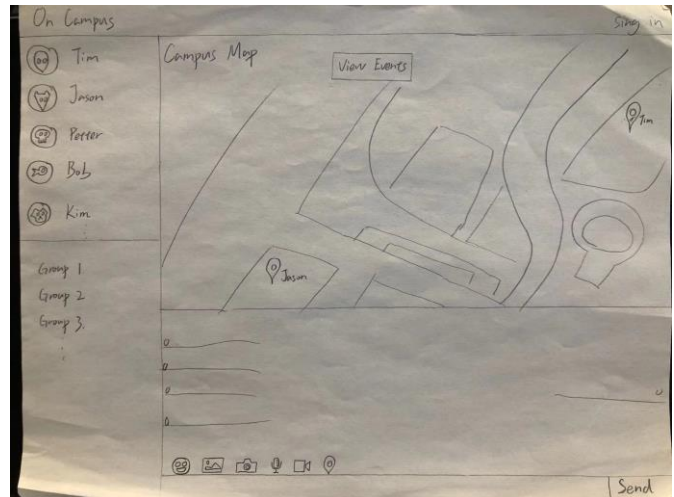
There is no text input box, which is not good for organizing the entered text

Here is the feedback given by this classmate. They think switchable windows are a good idea, but if you can show the event list and contact box at the same time, you can better organize your schedule.

They don't think it's a good idea to show whether a contact is in school. This violates personal privacy. They suggested showing his location on the map only when contacting the contact. This approach is relatively good.

Third Design

- Improvement:
- Separating the contact box group box and event columns for visual convenience
- Add text input box for input
- Cancel event button to view existing schedule



This is our revised plan. In response to user feedback, we made corresponding adjustments. Hope these improvements will be convenient for users

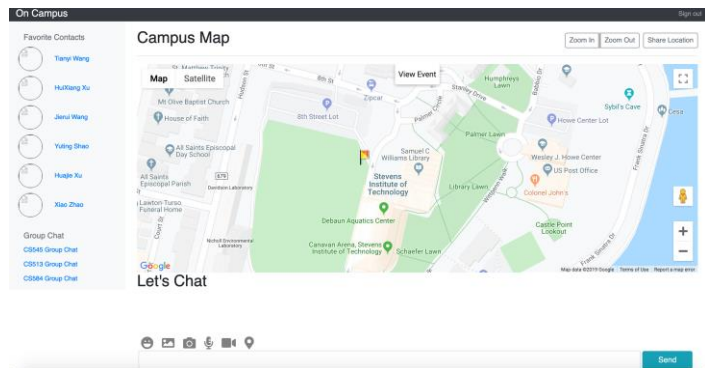
User Feedback



Good! Basically no problem, functions can be used normally



The page looks simple and emptiness.

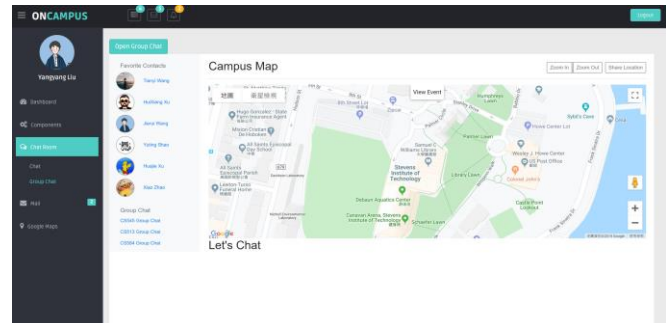


In the third iteration design, we had already had a functional web. Every component is placed in the suitable place as much as possible.

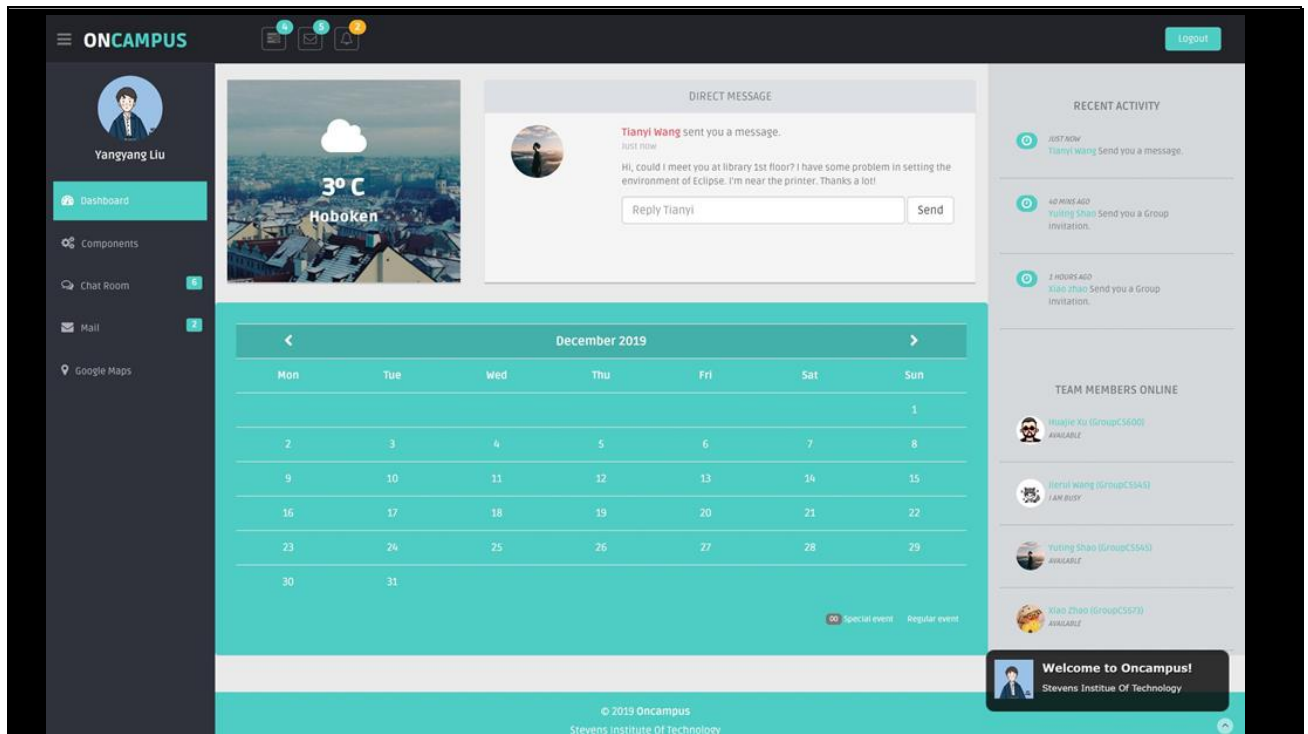
However, this page still has some problems. First, the page looks a little bit simple, and the color is not suitable to the page. Second, on the left side, the person's portrait is empty. Although it is a small problem, it affects the overall organization and beauty.

Final Design

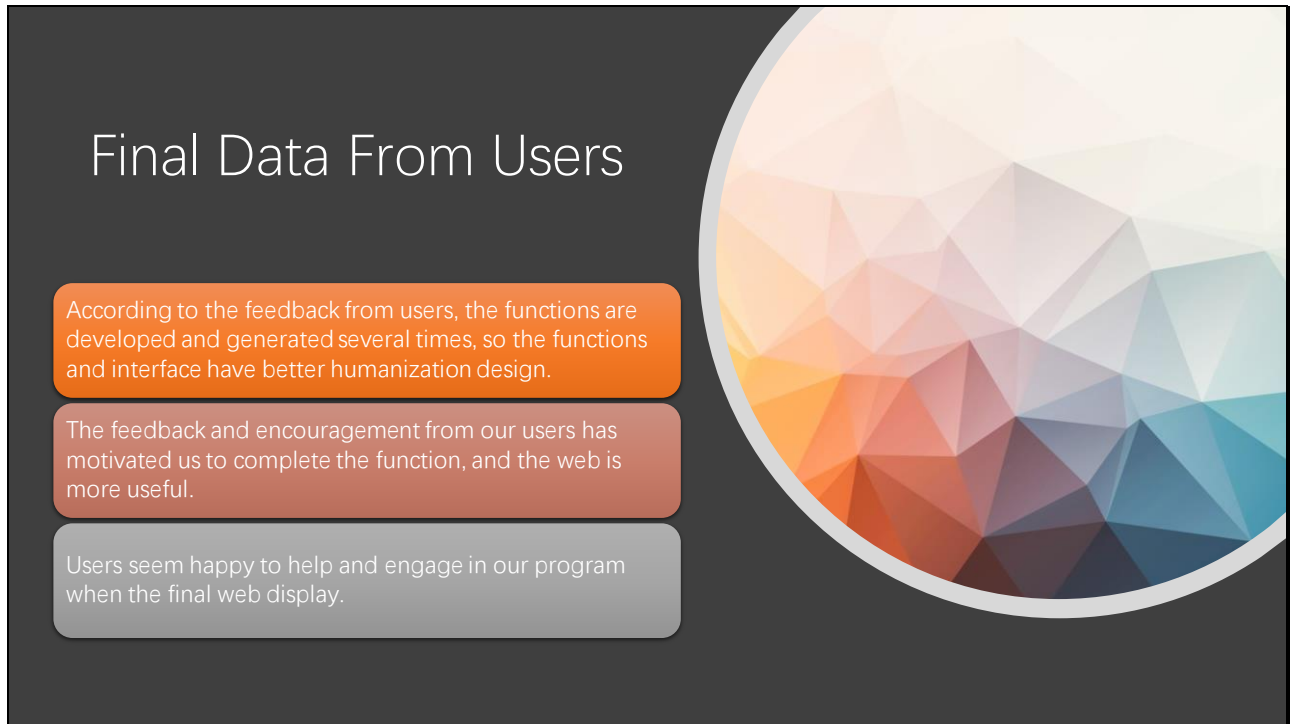
- Improvement:
 - We completed the whole page designs and add other functions and components as list on the left.
 - Optimize the personal information.
 - Add view events button on the map.



Based on the feedback from users in third design, we made a lot of changes in the final design, because we want to make it as more like a complete and functional website. We added several other web pages include login page, account page, dashboard, and mail etc. Users can check then on the left-top corner list button. We also added the view event button on the map top. Users can click the view events button to view the event about their groups or partners. At the end, users can check their status about not only include the chat and map status, but also have their group mails and courses information. Unfortunately, some functional components except chat and map have not complete yet.



Main Interface, includes Direct Message; Location; Temperature; Recent Activity; Team Members Online.



This is the users experience in the last design about our program. This project we got a lot of helpful suggestions and feedbacks from users, and we changed a lot of details and framework based on it. These positive suggestions to complete our program. During the iterations development of the program, we received over 30 responses from users.

User Feedback


During the development of the program, we received over 30 responses for our project. In the final, there are 5 users following and help us throughout entire development.




1. The interface is more concise than before, no more complexity functions stack together.



2. The web can generate the persons' positions quickly, and the map can mark the location where users want to meet. At same time, people can add event on the location to display want they would do at there.



3. People can talk with group in chat function, to have communication and share location at same time. It is better for users to find each other.



4. There still has some small problems. The web is still a demo, and it needs to be completed in the future. Some functions still looked a little bit simplify.

We changed some functional components and interface due to the previous user feedback, so in the final, the most responses are positive. A user who throughout the development of the On-Campus program thought that the main page interface is more beautiful and conscious, and proper layout makes the entire page look and feel logical. On the other hand, maps are responding faster than before, so the map function gives him better experience than pervious vision.

Some users thought that male the map and chat function in the same web page is a creative idea. They can look the location and talk with each others at same time. But some other users thought that the chat and map page still have some problems. In some cases, the border of the connection between chat and map does not look natural, and the chat function need to have more components like emoji , it may be cool.

Target E - Revisit

To make user open the main page
directly to save time.

We used questionnaire survey to
judge how long time we saved for
users.

Efficient

Throughout the project, we strived to make our project, onCompus, more efficient.

After several times iterations, we made a lot of changes.

We optimize the interface organization, and we made the distribution of each component more reasonable.


We changed the color to make the labels and buttons more conspicuous.


In the map component, we changed the mark symbol to make it special


In our program, On-Campus, the most important thing is time-efficiency. According to the sharing location, people need to view partners' location at the same time on the map page, so the time efficiency is important, and we tried a lot to save the time in this function. In the previous design, the mark symbol is not looked special. We changed it to a colorful flag. Users can quick click the map to add event and share the event to others. If people share location, other people can see the personal real-time location. According to that, people can meet others easily.


After that, we made the questionnaire survey to users about the efficient and convenient. Most of responses is better than previous design.


PAR Review


 **Perception: Grouping the similar function buttons**

 On the top, the 3 buttons: tasks, messages, events are put together. Clicking on these buttons will expand details of these notifications.

 **Attention: Make the important commands stand out**

 The "View Events" button is placed in the top center of the map.

 **Retention: Just requiring little need to be memorized by users**

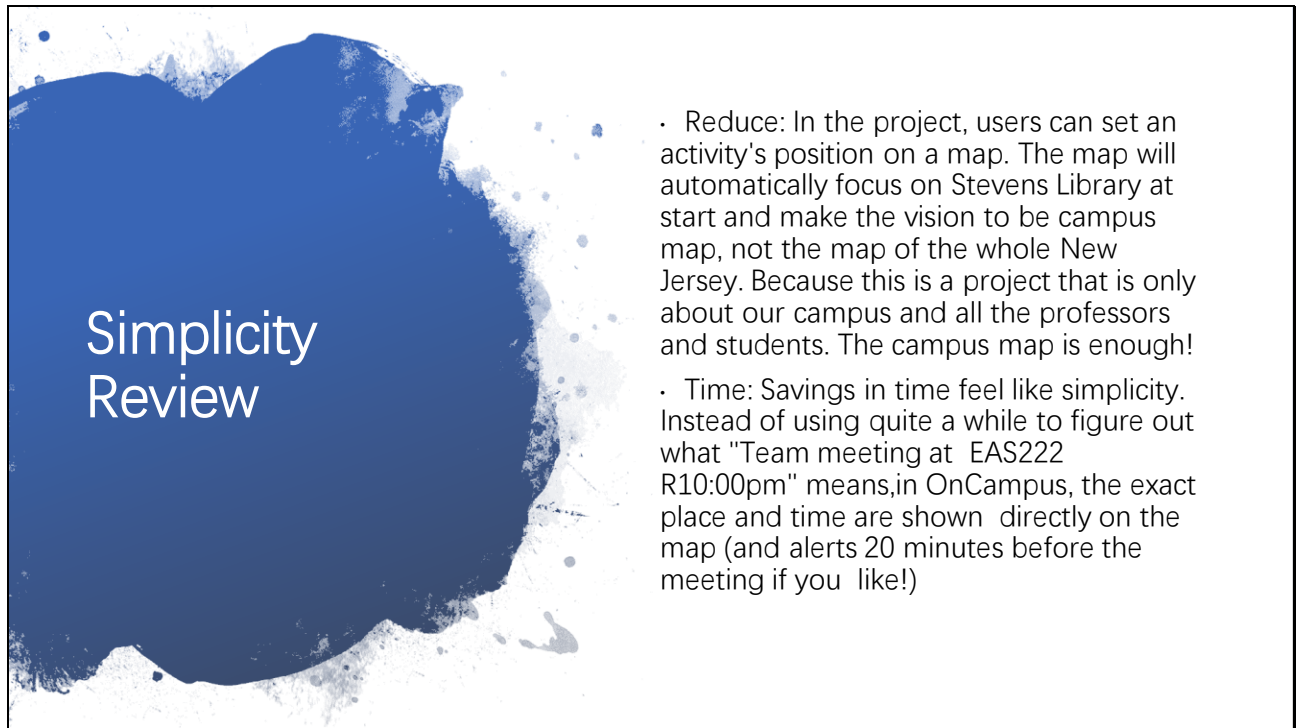
 For example, time and detail of all events are presented at the top banner after clicking the third button. So the user doesn't need to remember all events' time.

We have considered all Perception, Attention, Retention while building this app.

Perception means grouping the similar function buttons. On the top, the 3 buttons: tasks, messages, events are put together. Clicking on these buttons will expand details of these notifications.

Attention means making the important commands stand out. The "View Events" button is placed in the top center of the map.

Retention means just requiring little need to be memorized by users. For example, time and detail of all events are presented at the top banner after clicking the third button. So the user doesn't need to remember all events' time.



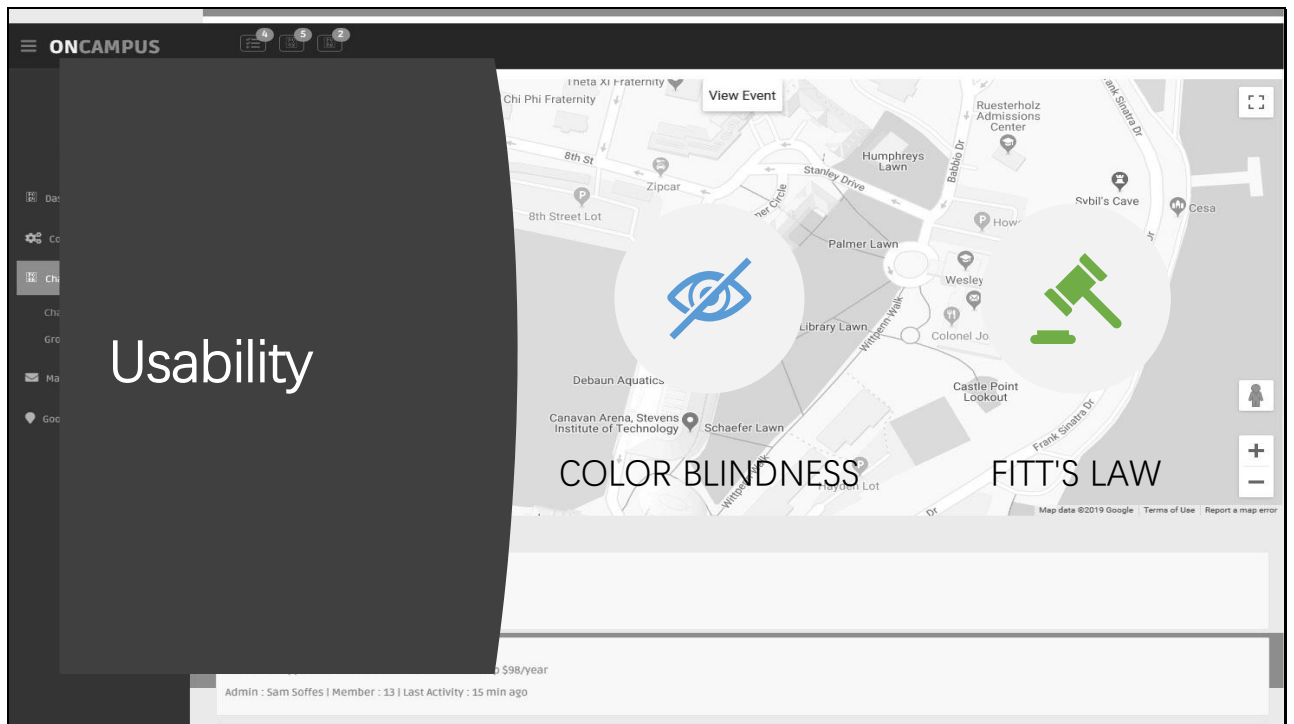
Simplicity Review

- Reduce: In the project, users can set an activity's position on a map. The map will automatically focus on Stevens Library at start and make the vision to be campus map, not the map of the whole New Jersey. Because this is a project that is only about our campus and all the professors and students. The campus map is enough!
- Time: Savings in time feel like simplicity. Instead of using quite a while to figure out what "Team meeting at EAS222 R10:00pm" means, in OnCampus, the exact place and time are shown directly on the map (and alerts 20 minutes before the meeting if you like!)

The two principles of simplicity that the team chose were reduce and time.

In the project, we just chose the Stevens to be the center in our map, because the target of our program is On-Campus. This program just need to focus on the campus. We reduced other map area on the website. Of course, if people are in other collage, they can change the map to other campus map, but this is in the future work.

The principle of "time" is important to the success of On-Campus due to our main function is real-time location share and event reminders. Users can set an event on the map to remind group members to meet and mark a symbol on the map to show where they want to meet. They can also cancel the mark symbol if they do not need again. The real – time location share that they can easy to meet other partners.



We simulated a color blindness person's view of our website by removing all red, green and blue colors. As the background, color blindness does not interfere the use of our app. The main colors are only black and green.

According to Fitts Law, time for hand movement depends on distance moved, D , and target size, W . Doubling distance is longer, but not twice as long and increasing the size of target makes pointing easier.

As for our project, every button on the sidebar is designed to be as large as possible. User can get to the page they want without clicking exactly on texts.



Heuristic Evaluation

- Simple and natural dialogue
- Speak the users' language
- Minimize the users' memory load
- Consistency

Our project works well in Heuristic Evaluation. All the dialogues are designed to be simple and straight. Users do not need to learn a lot, they can use this app in the similar way as they use other app.

Considering our target customers are students and professors at Stevens Institute of Technology, everything is written in English, the common language at Stevens.

Finally, the system is consistent. Many addons such as alerts are presented on screen only at request. The users will not feel like looking at an aircraft dashboard.



In the future work, we need to complete other component and optimize the map and chat components. Tutorial is one of the necessary thing we need to create at the beginning when the users first time login the web app.

In the personal account, we can enrich the selections for users. In the future, users can change their profiles and other personal information. In the future, if we have chance, we can collaborate with canvas, people can submit in the website by their canvas account, and the account can be synchronization.

As like above slide, there are a lot details need to be completed. In the chat component, we may add more little interesting triggers to make users have better user experience like emoji, and people can transmit files and pictures to others in the group chat or with each one. Otherwise, we can create a common folder that can store group works. Every group members can check, upload or download files in that folder.



UI Design

Reference

Template source: <http://www.cssmoban.com/cssthemes/9156.shtml>

Thank you for your attention
