



How's it going?

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I. Problem Space and Requirements gathering

A. Purpose: Product Market (audience & competitive analysis)

The goal of this product is to provide users with real-time dynamic information about various tourist and entertainment destinations through social collaboration and virtual connectivity. It connects users at a given place to users who desire to visit the place. The so formed virtual community exists and shares common interests for as long as the users at the desired location are willing or able to share information required by the users who are virtually connected.

1. Survey

As a part of requirements gathering, we conducted a survey to understand the extent of usage of the current online review system and willingness of users to contribute content. The survey consisted of 11 closed-ended questions administered to 10 participants in the age group of 18 to 35 years. The following information was revealed in the survey.

- When deciding whether to go to tourist or entertainment destinations, participants generally like to have basic information for perception and they greatly rely on online sources.
- Most Participants like to get latest information about the event before going.
- Most Participants think that online reviews are reliable.
- Most Participants are reluctant to write reviews.
- Most Participants hold positive attitude towards location based services.
- Participants hold different attitudes towards sharing photos with friends and strangers.

2. Interview

To understand the responses from the survey better, we interviewed 6 participants in the group of 18 to 35 years. The interview consisted of 5 open-ended questions and following observations were made.

- Once again, most participants expressed heavy reliance on online reviews. One participant said the anonymity of reviewers may be a problem to trust.
- Participants usually don't prefer writing reviews. Some participants said they only write reviews to complain about bad services or products.
- When deciding whether to go to activities and/or events, participants generally consider a lot of factors which differ from one another.
- While in closed-ended questionnaires most of participants thought prior knowledge on current environment is helpful, no one mentioned it in the interview.

Lessons from Survey and Interview

Though not quite satisfied with the current online review system, the participants didn't perceive an idea of what would help them make decisions better. When real-time information was suggested as a solution, they seemed to welcome the idea.

All the participants consumed the content of the online reviews but none of them seemed motivated enough to contribute to the content. They needed a much stronger trigger like utter dissatisfaction due

to prior misconception, higher expectations or being duped by the seller. Some even confessed to contribute to the content when influenced by strong positive factors like overwhelming happiness from exceeded expectations. Therefore, to bring people to contribute, triggers apart from anticipation of mere satisfaction from contribution are to be employed.

3. Competing Products

Waze Social GPS, Maps & Traffic¹

Waze is a community based mapping, traffic and navigation application. After typing in their destination address, users drive with the app open on their phone to passively contribute traffic and other road data, but they can also take a more active role by sharing road reports on accidents, police traps, or any other hazards along the way, helping to give other users in the area a 'heads-up' about what's to come. In addition to the local communities of drivers using the app, Waze is also an active community of online map editors who ensure that the data in their areas is as up-to-date as possible.

AroundMe²

AroundMe identifies the users' position and allows users to choose the nearest place of their interest (ex. bank, gas station etc.). It then shows a list of businesses in the category, the distance from where the user is, location on the map, route and contact details of the place.

B. Literature Review

Katherine Mc. Kinnon⁵ and Patrali Chatterji⁶ say that consumers trust user generated content more than the advertisers' claims and that word-of-mouth is a very powerful tool online. Products with negative reviews don't pick up sales even after improvising.

Jullita Vassileva⁷ lists theories that inspire design approaches to motivate user participation. From a behavioral economics view of motivation, gamification and game mechanics are used to create a sense of ownership, achievements, status, community collaboration and quests in the users who participate and contribute.

Allowing the users to own points, tokens, badges etc. will cause a sense of loyalty initially but a sense of achievement has to be created eventually to enable intrinsic motivation rather than extrinsic rewards. Therefore, extrinsic rewards could be used initially to give the user a taste of the system and then intrinsic motivation could be used as a compelling factor to keep the user in the ecosystem.

C. Goals (Usability and Experience)

1. Usability Goals

The following are the usability goals of the application.

- | | |
|-----------|--|
| Effective | The application has to fetch all the users and the stream data at a given location. |
| Efficient | It should enable users to quickly switch between tasks and accomplish major tasks with one hand. |
| Safe | The identity of the users and location details should be kept private and should only be |

shared as the user chooses.

- Utility The location of the user should be retrieved using GPS thereby limiting exclusive data entry.
- Learnability Users should be able to use the application without any guided tour of the application.
- Scalability The application should have adaptive streaming bit rate based on the network condition to ensure smooth streaming.

2. User Experience Goals

The following are the user experience goals of the application.

- Enjoyable The application should be compelling enough for the users to be willing to use it while having a good time.
- Exciting The users should feel excited about sharing the information. Excitement is an intrinsic trigger.
- Helpful The application should help users make choices that help them save time, money and disappointment.
- Motivating The application should have triggers that motivate the users to share information.
- Rewarding Reward is an extrinsic trigger that should be used initially to introduce the user to the system.
- Fun Because the initial target audience of the application are teenagers (13 to 19 years) and young adults (20 to 40 years), the application should be cool and fun to use as per the preferences of the target users.
- Emotionally fulfilling Contributing to the content should bring about a sense of emotional fulfilment in the users to motivate them to participate more.
- Enhancing sociability The application provides a platform to form communities with new people. Although transient, these communities help users meet new people and share common interests.

D. Defining the Problem Space

External factors that influence a person's experience of a tourist or entertainment destination are majorly ambience of the place, service offered, quality and quantity of the crowd at the place and kind of company the person has. People are forced to make decisions to visit a place based on their previous understanding of these factors or from antiquated information provided by friends or online reviews. Many-a-time, this information might not be valid for the present time as these factors are ever changing and the information is not first hand. It's the person's understanding of the perspective provided by the information. This information is also heavily clouded by the internal factors that influence a person's

experience of a place. These factors could pertain to the information giver or the receiver. The internal factors include current state of mind, requirements, preferences, expectations etc. Even if the second hand information could provide a fairly good idea of the external factors, it is not possible to provide a person the information about how his/her experience will be after combining both internal and external factors. This can only be experienced at first hand. This product is designed to help users visualize their experience of visiting the place and then make a decision through first hand information.

By viewing what the place looks like currently, the users will be able to extrapolate their experience of visiting the place as closest as possible. This will not only save the users time, money and disappointment of being at a place that isn't quite to their tastes at the present moment, but also help them enhance their experience and make better use of their time and visit. It need not be necessarily applicable to places the users didn't visit previously. It could also be used, for example, to check if a user's favorite restaurant is busy or is serving the seasonal food right now. This project majorly deals with avenues like restaurants/coffee shops/cafes, food/music/cultural festivals, tourist attractions, movies/theatres etc.

II. Design

A. Design and Conceptualization

1. Detailed Conceptual Model

The app is will allow users to view other users location on the map. They will also have the ability exchange text, send or receive request for video streaming or share picture. Users can be viewer or reporter depend on what role they play during the interaction. Users who send request to others to stream video for him is called viewer, and users who receive request from others to use his camera is called reporter. The system has the following five action components:

- Search the map
- Public streaming
- Chat
- Request picture
- Request video stream

As for the users status, there will be three options:

- Streaming mode; when user is broadcasting live video publicly.
- Active mode; when user is not streaming but ready to receive requests.
- Hidden mode; when user is online but he is searching for users to see through their camera and not interested in receiving requests or be discovered on the map.

The viewer can search the map to locate and select from the active users. Once they find an active user in the location they are interested in, he/she can chat, send picture request, or send live streaming request.

The reporter on the other side who receive the request will have the choice of approve or reject the request. By approving the request, they will start streaming video or sending pictures through their camera (Figure 1).

2. Users motivation through Coins Exchange

In order to get people motivated to help other users who want to see through their camera we developed the Coins concept. Within this app, the Coins will act as the points or the currency of exchange between viewer (person viewing the video) and reporter (person at the site publishing the video).

Each time the viewer use the reporter camera to view something, Coins will be transferred from the viewer to the reporter account. The number of coins transferred will depend on the viewing duration and pictures will takes normally less than video, and public video streaming for multiple users will cost less for each viewer but more reward for the reporter considering that many users can view the stream. Coins can also be purchased from the main application site.

Reporters will always have the choice to performing free services or take coins for reporting by adjusting his profile setting. Since the nature of social interaction is hard to predict and it does not always evolve as the designers anticipate, we decided to gave the users the option of using the coins exchange feature.

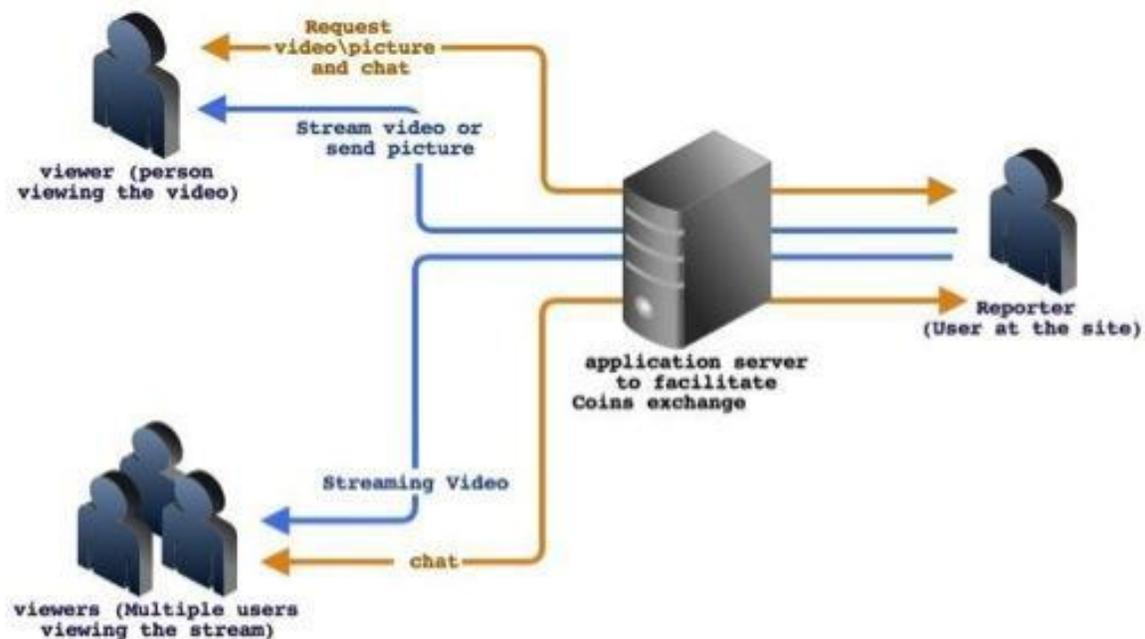


Figure 1: Viewer-reporter workflow

B. Prototyping and Development

1. Paper prototyping

In this prototype, we were trying to develop a design with the minimum number of steps to perform the basic two tasks (viewing and streaming). Things like browsing, and transition between reporter to viewer more and vice versa are needed to be quick and smooth. At the same time, we didn't want to increase the cognitive load by having many options, small icons close to each other, or text that requires deep attention.

Most of the above requirements (navigation workflow and main action section) were developed during the sketching. Each of the members of the team separately developed different versions of the sketch prototype. Then we met and merged our design, and for some layout we developed new ones to meet the requirements.

For quicker access, we had both options (view and broadcast) available on the main page at most times, and we also included the map and the search bar in the home page (figure 2, & 3).

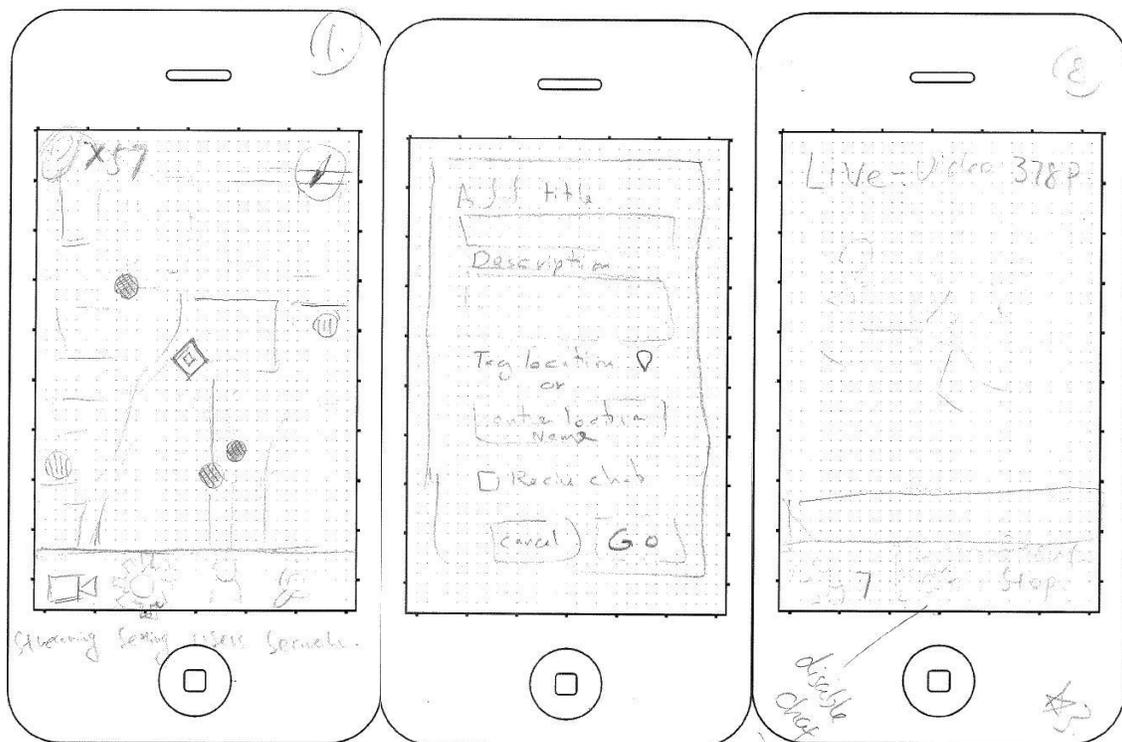


Figure 2: Paper prototype (stream mode)

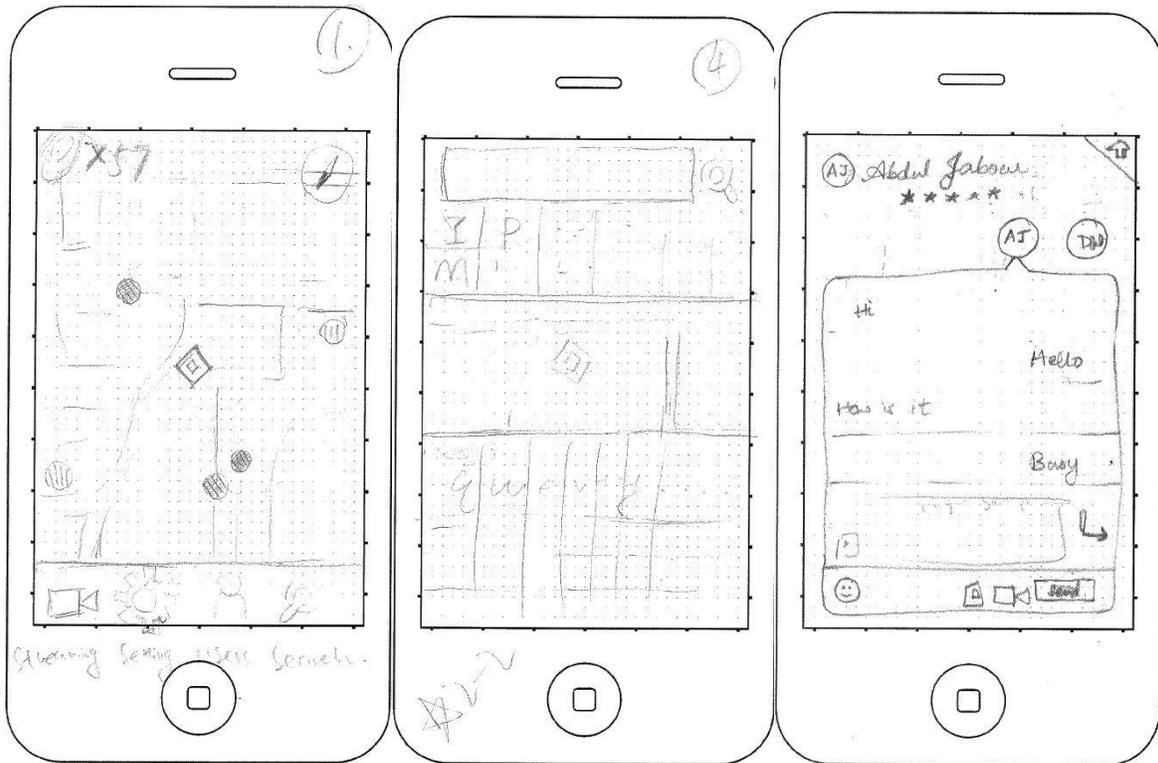


Figure 3: Paper prototype (view mode)

2. Cognitive Walkthrough

The cognitive walkthrough, included the preliminary evaluation of the paper prototype in general and specifically the workflow. The main focus was on the main two tasks viewing and streaming.

The tasks evaluated in the view mode were;

- searching by address, choose category to view near the entered destination (ex: restaurants or coffee shops)
- view users in the located address
- identify the type of user (streaming or active)
- view user's details, contact user
- chat with users, request photo, or video stream

The tasks evaluated in the stream mode were mainly to start streaming video, pictures, and be available to chat.

Results

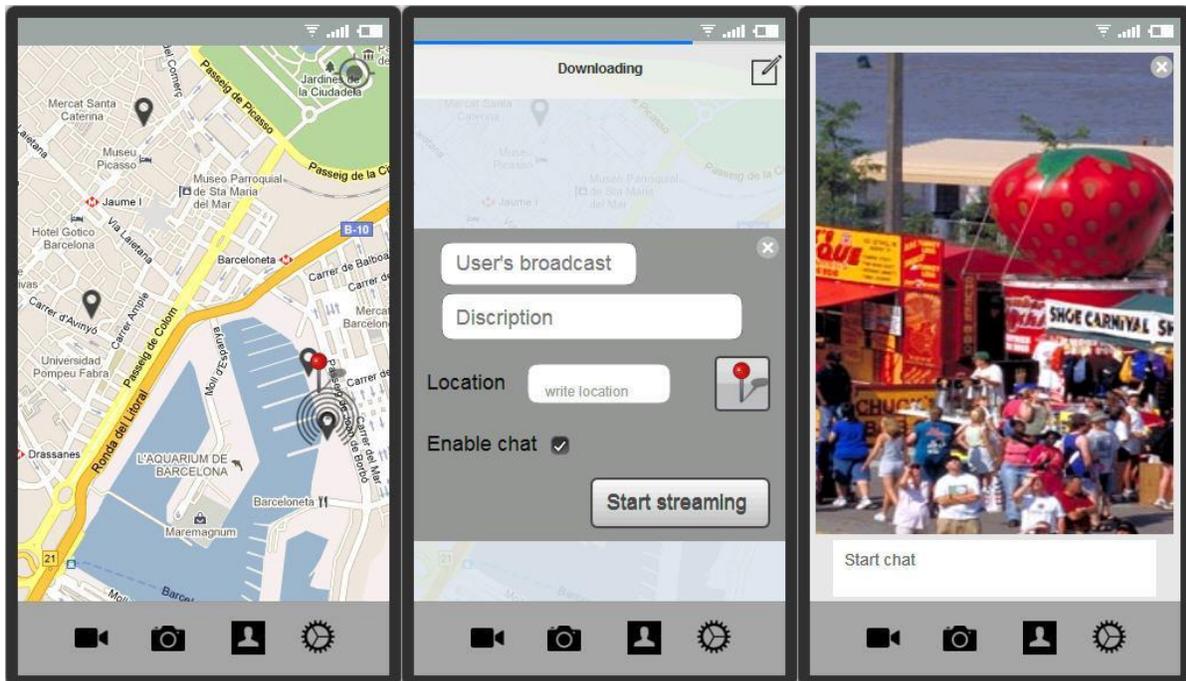
The following observations were made in the walkthrough.

- It is difficult to understand at first how to proceed from the map. Some guiding text will better enable the user to follow the flow.

- The chat screen is confusing with the name of the person on the top of the screen switching every time.
- The feature for minimizing and maximizing the video makes it easy to switch between chat and video.
- The feature for enabling or disabling chat while streaming is confusing as the viewers who send a video request or subscribe to stream might want to talk to the reporter.
- From the home screen, it's difficult to tell that the search button is for searching places or people
- It's also difficult to tell the status of the reporters for a first time viewer.

3. High fidelity prototype

The high fidelity prototype was developed based on the paper prototype using <https://fluidui.com>. During this stage, we added some of detailed features like how list of users will be displayed on the map (distinguishing between active and streaming users), and the shape of icons and action buttons. Some of the design layout are in (figure 4) below.



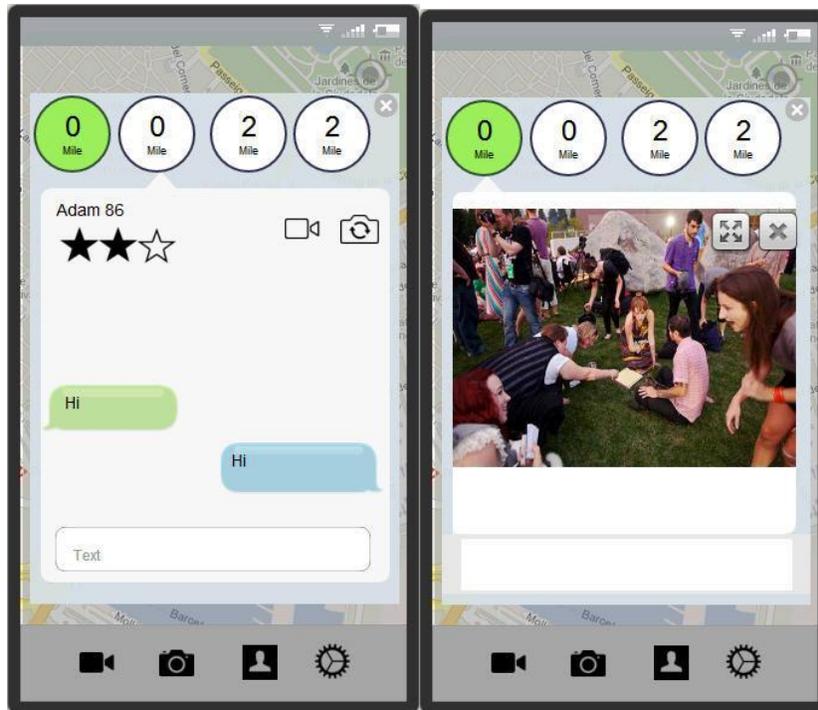


Figure 4: High fidelity prototype

4. Dynamic prototype

For the dynamic prototype, we used Adobe Fireworks for graphic design and Dreamweaver for the interaction design. Distinguishing between free and coin users in the map view was added in this phase. In the dynamic prototype, we added the option of viewing streams of multiple users at the same time. We also added features like search users by username (where people can search for specific user), and settings. After the completion of the dynamic prototype, the design was uploaded to the web host (<http://541.site11.com/>) (for screenshot see Appendix H).

III. Validation (Product Assessment)

A. Usability Study Findings

To validate the usability of the product, we requested four evaluators, with designations of Senior UX designer, Design lead and graduate student, to conduct expert evaluations. For each one of the evaluators, an evaluation package was sent via email including the links to:

- project summary
- evaluation instructions
- dynamic prototype
- task error log
- post-task questionnaire

The evaluators were asked to complete five scenario based tasks using the prototype, record the errors they encountered and finish the post-task questionnaire. In the end, the evaluators were interviewed individually via Skype or in person to further discuss their suggestions about the application.

1. Task Error

In the usability testing, we have used five tasks based on the scenarios we have. They are:

- Search for Military Park and identify who are streaming for free at the location and view video
- Switch to another free user, then chat, request pictures and request videos.
- View pictures and videos of multiple users at the same time.
- Search for a specific person and start chatting.
- Now you are at Military Park for the Irish festival. Start streaming video and help people with queries.

We believe that these tasks contain the most frequently used features of the product and are essential to the overall usability.

Evaluators were asked to record different types of the errors during the testing. Below is the types of errors in the log. They were also asked to measure the overall completion status for each task by choosing one of the following metrics:

- easy to complete
- complete with difficulty
- incomplete
- failed

| Types of error | Description |
|--------------------------|---|
| Learnability | Does the function need explicit learning? |
| Visibility | Are you able to see all the required information on the screen to make a decision? |
| Navigation | Did you think an action would lead somewhere but it lead to some other place? |
| Interaction | Though the prototype isn't very interaction, if you are able to understand what gesture is to be performed on a touch device, do you think there could be a better way to interact? |
| Metaphors and vocabulary | Is the vocabulary good enough to be understood by different types of users? |
| Visual design | Problems with aesthetics |

Results

In total, four evaluators had made 5 errors throughout all their five tasks (mean = 1.25, SD = 1.09). Figures below show the distribution of errors by participants, tasks, and type of error. It can be seen that evaluators generally made very few errors in the testing process. Most errors they made are regarding the learnability of the application. That partly explained why task-1 has the most number of errors.

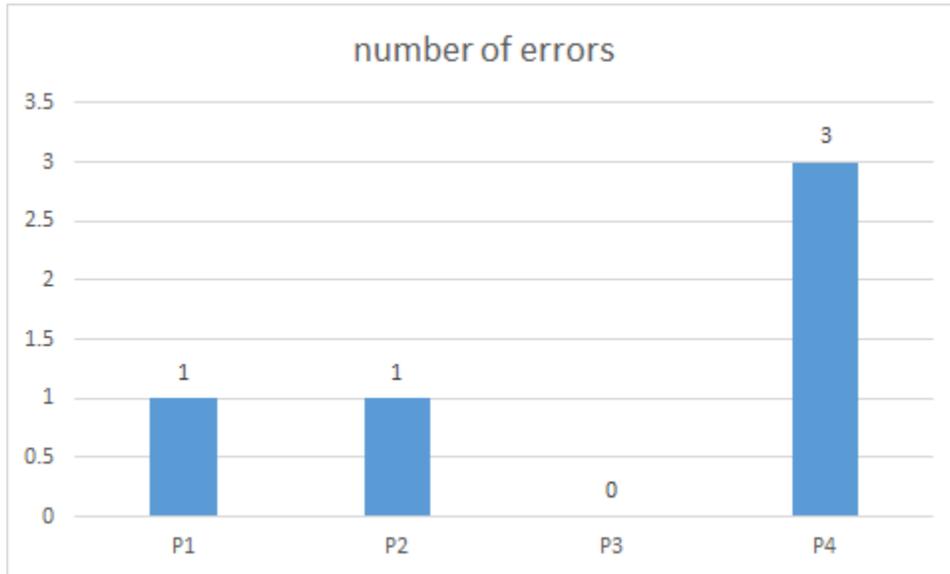


Figure 5: Error distribution by evaluator

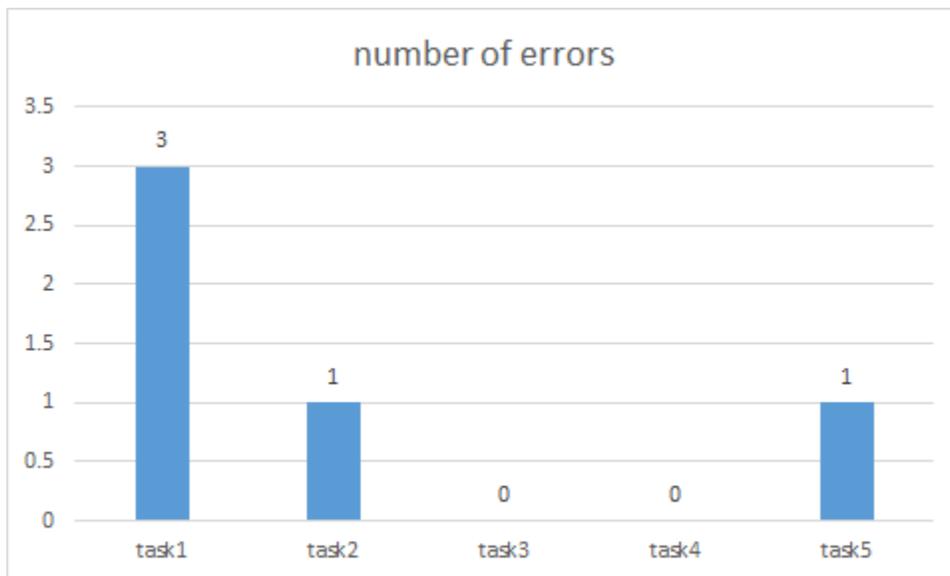


Figure 6: Error distribution by task

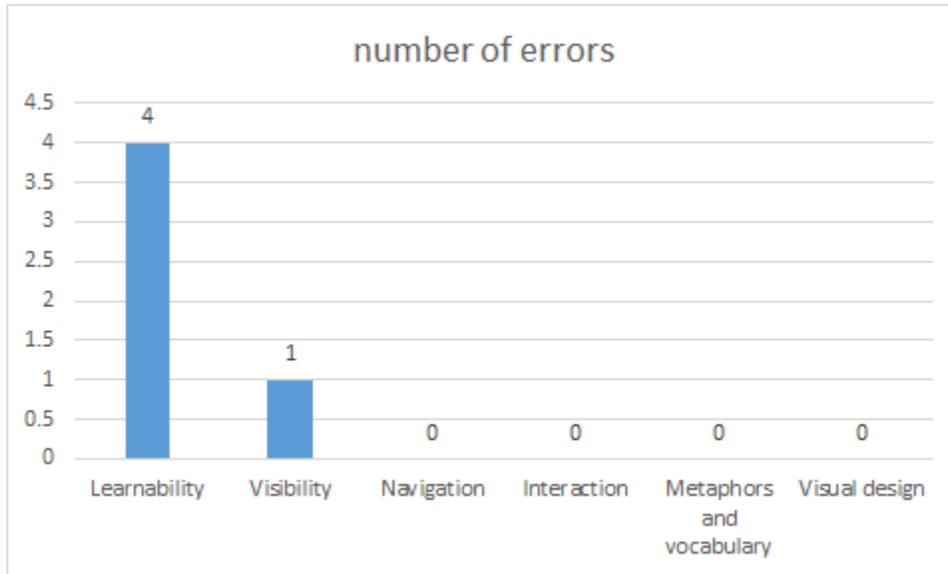


Figure 7: Error distribution by type of error

For the completion status, the majority of responses the evaluators gave were “easy to complete” which is consistent with the little number of errors. Once again, task-1 received poorer responses compared to other tasks.

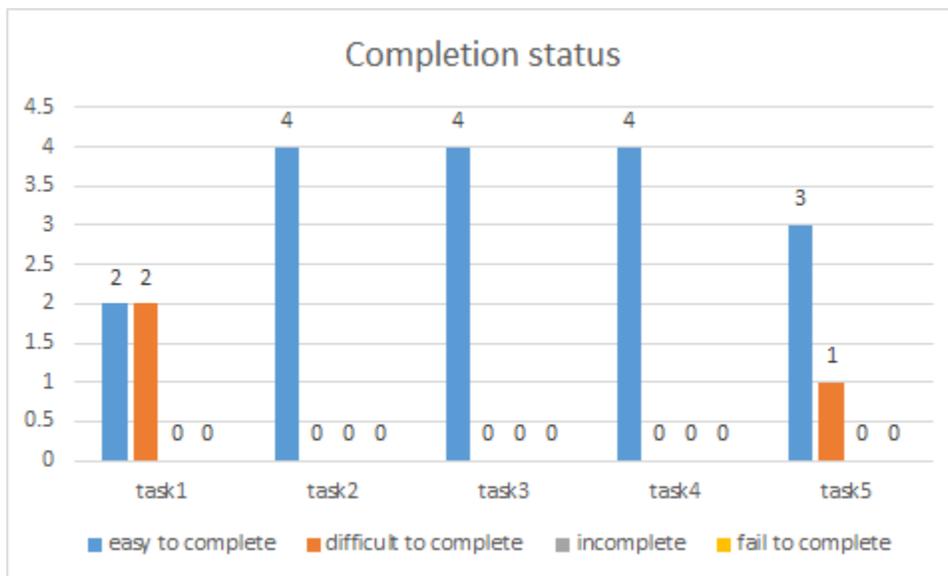


Figure 8: Completion status

2. Post-Task Questionnaire

Each evaluator was asked to finish the post-task questionnaire after finishing all the tasks. The questionnaire had ten statements regarding their feelings on the product such as “The concept of the application was clear to me” or “ It is easy to understand the features offered in the application”.

Participant responses were measured on a likert scale from “strongly agree” to “strongly disagree” (5 point scales). The figure below shows the number of responses for each statement of the questionnaire. It is clear that participants generally hold positive attitudes toward the usability of the product.

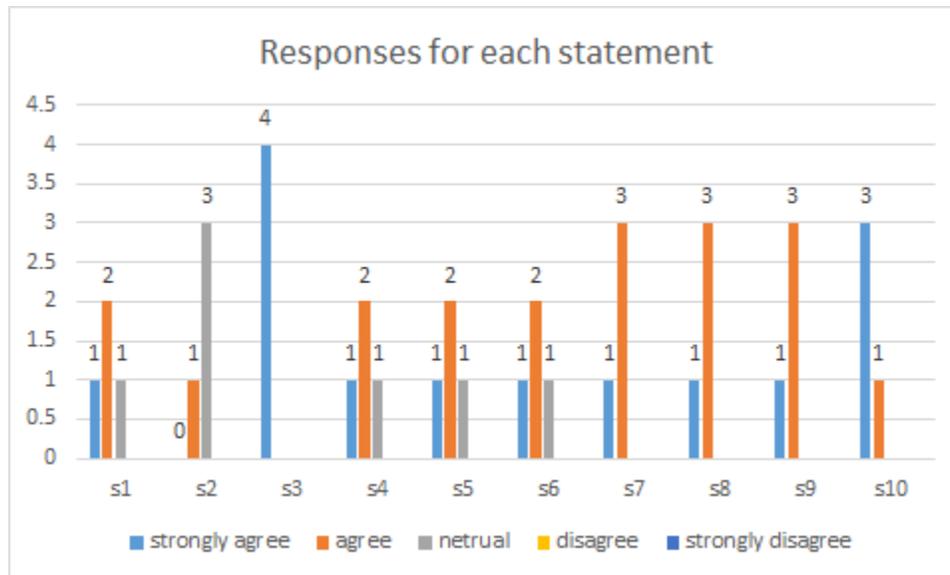


Figure 9: Questionnaire responses

3. Interview

Each evaluator was interviewed individually to look for more insights from expert perspective. Below are some key findings from the interview.

- **All evaluators found the application easy to use:** When asked about their feeling using the application, all evaluators said it was very easy to know how to complete the tasks.
- **Learnability might be a problem:** However, there were two evaluators who were concerned about the learnability of the application, stating that first time users might have some difficulties. Their suggestions include adding a tutorial for the first time users and adding value proposition and dashboard features to the landing page because currently the first screen of the application is not so intuitive.
- **Evaluation should focus more on expert users:** One evaluator thought our tasks should focus more on expert users because the current mockups were designed for users who are already in the ecosystem.
- **The concept of the application may have more uses than it intended to:** While we were exploring more avenues of application for the concept, more than one evaluator entrenched the same. Examples given are branding, publish new events etc.

B. Summary of Product Assessment

1. Problems with the Product

From the results of the evaluation, it is clear that the application has good overall usability. Evaluators found few tasks confusing during testing but they reported positive responses in questionnaire and interview.

Learnability issues can be the main source of the problems. In the interview, more than one evaluator was concerned about the learnability of the product. Their suggestions include adding a tutorial for the first time users and adding value proposition and dashboard features to the landing page because currently the first screen of the application is not so intuitive. Among all five errors identified, four of them fall into the category of learnability. They are:

- At first, two evaluators didn't understand the icon on the map that represents users and their status.
- One evaluator didn't understand how to add description for a broadcast, thought it was a search bar.
- It took sometime for one evaluator to understand what different colors for icons mean.

Besides learnability issues, evaluators also reported some other minor problems in the testing and interview. They are:

- Add "active/inactive" in settings.
- The icons for individual users were little dominating than that of the multiple users icon.
- Inconsistency in "start streaming" and "sharing pictures".

2. Recommendations for Future Development

Based on the above, we made some changes and conclude some recommendations for the future. The change made were transferring the "stay active" ability in the reporter view into option that can be controlled from settings (see Appendix I). More changes that can be applied in the future are listed below:

- Fix the issues listed in Problems with the Product (mainly first time tutorial)
- Mine user tastes and match them with users with similar likes and dislikes
- Explore other possibilities of the concept of the application
- Develop the application based on the refined prototype

IV. Appendix

A. Initial Product Abstract

1. Purpose

The goal of this phone application is to promote virtual connectivity and allow users to see how the place/event is like in real time without physically being there.

2. Goal

To help users compare or organize their trip and see how busy, active, or fun the place is by contacting other users that might be at the destination place and using the same application.

The app also allows users to publish live video streaming with GPS location or place name address for every other users view be informed about the ongoing activity. It also allows one to one users communication via text, share pictures, or live video streaming.

3. Problem space

Often time we enjoy being somewhere for the environment, the people around us, or the crowd there. People prefer certain places when they are busy like events, and other places when quiet. Sometimes they can't even describe the environment they are looking for but they know it when they see it.

Choosing where to go can sometimes be difficult if we don't know how the place is right now. There are several tools and tips that we could use to learn about the place we are planning to visit. Resources like online reviews, brochures and google view can provide good sense of the place but they lack the real-time information and social interaction aspects. The same place can be significantly different from weekday to weekend or day and night. Such details are hard to find online, and even if it's there, it is rarely real time information.

4. Example

Adam is in Orlando for vacation and he is getting ready to start the day. He looked up the visitor guide but there are too many things to see. So, he checks the application for must-see things close-by. The application shows him two events within a 5-mile radius; live public concert in the north side of town and Greek festival at the west side. Both events depend on the activity level and it is difficult for him to compare without having an idea of how things might be at the moment. He searched in this application and found 3 users for the first event and 4 users attending the second. The application tells him that two of the people attending the first event have tastes very similar to him and the other one's ideas might not be so similar. He contacted one of the users and he sends him pictures of how it is.



Figure 10: Map view

5. Target Users

- Travelers in an unfamiliar place deciding which event /activity to attend
- People who want to stream their real time experience
- Families and/or friends keep in touch with each other
- People at unexpected or major incident, emergency or crisis that needs to be shared or documented
- Teenagers or college students

B. Requirements Gathering - Survey

I check reviews of places and events online before I decide to book tickets or go here.

| | | | | |
|-------------|--------|-----------|------------|-----------------|
| Very rarely | Rarely | Sometimes | Frequently | Very frequently |
|-------------|--------|-----------|------------|-----------------|

I use apps like 'Yelp' to check for reviews of places on my phone.

| | | | | |
|-------------|--------|-----------|------------|-----------------|
| Very rarely | Rarely | Sometimes | Frequently | Very frequently |
|-------------|--------|-----------|------------|-----------------|

I use apps like 'Around me' to check for updates of events.

| | | | | |
|-------------|--------|-----------|------------|-----------------|
| Very rarely | Rarely | Sometimes | Frequently | Very frequently |
|-------------|--------|-----------|------------|-----------------|

I do check-ins whenever I visit a new place.

| | | | | |
|-------------|--------|-----------|------------|-----------------|
| Very rarely | Rarely | Sometimes | Frequently | Very frequently |
|-------------|--------|-----------|------------|-----------------|

I share pictures of myself and my friends from places I hang out on social networking sites.

| | | | | |
|-------------|--------|-----------|------------|-----------------|
| Very rarely | Rarely | Sometimes | Frequently | Very frequently |
|-------------|--------|-----------|------------|-----------------|

I'm comfortable using location services on my phone.

| | | | | |
|---------------|-------------------|---------|-----------------|-------------|
| Very unlikely | Somewhat unlikely | Neutral | Somewhat likely | Very likely |
|---------------|-------------------|---------|-----------------|-------------|

I trust the online reviews I read about places and events.

| | | | | |
|---------------|-------------------|---------|-----------------|-------------|
| Very unlikely | Somewhat unlikely | Neutral | Somewhat likely | Very likely |
|---------------|-------------------|---------|-----------------|-------------|

I write online reviews of events and places I've been to.

| | | | | |
|-------------|--------|-----------|------------|-----------------|
| Very rarely | Rarely | Sometimes | Frequently | Very frequently |
|-------------|--------|-----------|------------|-----------------|

If there is a lot of buzz about an event going on, I'd definitely go and check it.

| | | | | |
|---------------|-------------------|---------|-----------------|-------------|
| Very unlikely | Somewhat unlikely | Neutral | Somewhat likely | Very likely |
|---------------|-------------------|---------|-----------------|-------------|

I decide to go to a place or an event depending on the environment of the place right now.

| | | | | |
|---------------|-------------------|---------|-----------------|-------------|
| Very unlikely | Somewhat unlikely | Neutral | Somewhat likely | Very likely |
|---------------|-------------------|---------|-----------------|-------------|

Before going to an event for the first time, is it important to see how the place is right now.

| | | | | |
|--------------------|----------------------|---------|--------------------|----------------|
| Highly unimportant | Somewhat unimportant | Neutral | Somewhat important | Very important |
|--------------------|----------------------|---------|--------------------|----------------|

C. Requirements Gathering - Interview - Open Questionnaire

1. What are the things you check before you decide to attend an event (music or cultural festival)?
2. What are the things you wish you knew before going to such events?
3. What do you use the online reviews for? Do you think they help you?
4. Do you like writing reviews?
5. What information do you think reviews lack?

D. Usability Test Results

| S.No | Tasks | Completion status | Errors | | | | | | | Comments |
|------|---|-------------------|--------------|------------|------------|-------------|--------------------------|---------------|-------|----------|
| | | | Learnability | Visibility | Navigation | Interaction | Metaphors and vocabulary | Visual design | Other | |
| 1 | Search for Military Park and identify who are streaming for free at the location and view video | | | | | | | | | |
| 2 | Switch to another free user, then chat, request pictures and request videos | | | | | | | | | |
| 3 | View pictures and videos of multiple users at the same time | | | | | | | | | |
| 4 | Search for a specific person and start chatting | | | | | | | | | |
| 5 | Now you are at Military Park for the Irish festival. Start streaming video and help people with queries | | | | | | | | | |

Figure 11: Task error log

| S.No | Tasks | Completion status | Errors | | | | | | | Comments |
|------|---|-------------------|--|--|------------|-------------|--------------------------|---------------|-------|---|
| | | | Learnability | Visibility | Navigation | Interaction | Metaphors and vocabulary | Visual design | Other | |
| 1 | Search for Military Park and identify who are streaming for free at the location and view video | Easy to complete | | | | | | | | I didnt find any issues while doing the task. I was able to identify the video streaming by looking at the icon. The only issue - when you say streaming for free what do you mean. |
| 2 | Switch to another free user, then chat, request pictures and request videos | Easy to complete | To some extent, when I saw this task, I understood that if the user name is in green then its free! and things are enabled or disabled | | | | | | | |
| 3 | View pictures and videos of multiple users at the same time | Easy to complete | | As the users icons were little dominating with comparison of the multiple users icon | | | | | | |
| 4 | Search for a specific person and start chatting | Easy to complete | | | | | | | | Easy to finish! visuals very clear! |
| 5 | Now you are at Military Park for the Irish festival. Start streaming video and help people with queries | Easy to complete | | | | | | | | Easy to finish! visuals very clear! |

| S.No | Tasks | Completion status | Errors | | | | | | | Comments |
|------|---|--------------------------|-----------------------------------|------------|------------|-------------|--------------------------|---------------|-------|----------|
| | | | Learnability | Visibility | Navigation | Interaction | Metaphors and vocabulary | Visual design | Other | |
| 1 | Search for Military Park and identify who are streaming for free at the location and view video | Complete with difficulty | I wasnt sure what the icons meant | | | | | | | |
| 2 | Switch to another free user, then chat, request pictures and request videos | Easy to complete | | | | | | | | |
| 3 | View pictures and videos of multiple users at the same time | Easy to complete | | | | | | | | |
| 4 | Search for a specific person and start chatting | Easy to complete | | | | | | | | |
| 5 | Now you are at Military Park for the Irish festival. Start streaming video and help people with queries | Easy to complete | | | | | | | | |

| S.No | Tasks | Completion status | Errors | | | | | | | Comments |
|------|---|-------------------|------------------------------------|--|------------------|---------------------|--|---------------|-------|--|
| | | | Learnability | Visibility | Navigation | Interaction | Metaphors and vocabulary | Visual design | Other | |
| 1 | Search for Military Park and identify who are streaming for free at the location and view video | Easy to complete | Intuitive enough and easy to learn | Very clear | Easy to navigate | Easy and Responsive | Widely used terms. Very easy to figure out | Decent | | |
| 2 | Switch to another free user, then chat, request pictures and request videos | Easy to complete | Intuitive enough and easy to learn | Though I figured out, I didn't think the green and orange clearly indicated that it is about the type of user accounts. After a while, I could figure it out. Generally in such applications green, orange, and gray are used for online, idle, and offline. | Easy to navigate | Easy and Responsive | Widely used terms. Very easy to figure out | Decent | | |
| 3 | View pictures and videos of multiple users at the same time | Easy to complete | Intuitive enough and easy to learn | Very clear | Easy to navigate | Easy and Responsive | Widely used terms. Very easy to figure out | Decent | | |
| 4 | Search for a specific person and start chatting | Easy to complete | Intuitive enough and easy to learn | Very clear | Easy to navigate | Easy and Responsive | Needed little thought process. Could easily figure out what they are even they are new | Decent | | |
| 5 | Now you are at Military Park for the Irish festival. Start streaming video and help people with queries | Easy to complete | Intuitive enough and easy to learn | Very clear | Easy to navigate | Easy and Responsive | Widely used terms. Very easy to figure out | Decent | | I thought after selecting the pictures, I will have a button that says sharing. It is startlight forward for video, however, for poictures there should be a share button. |

| S.No | Tasks | Completion status | Errors | | | | | | Comments | |
|------|---|--------------------------|--|------------|------------|-------------|--------------------------|---------------|----------|-------|
| | | | Learnability | Visibility | Navigation | Interaction | Metaphors and vocabulary | Visual design | | Other |
| 1 | Search for Military Park and identify who are streaming for free at the location and view video | Complete with difficulty | spent some time to understand which user is streaming; the first screen of the app is a little confusing | | | | | | | |
| 2 | Switch to another free user, then chat, request pictures and request videos | Easy to complete | | | | | | | | |
| 3 | View pictures and videos of multiple users at the same time | Easy to complete | | | | | | | | |
| 4 | Search for a specific person and start chatting | Easy to complete | | | | | | | | |
| 5 | Now you are at Military Park for the Irish festival. Start streaming video and help people with queries | Complete with difficulty | spent some time to understand event title and description are not search bars | | | | | | | |

Post-Task Questionnaire

Please rate the following statements based on your experience of using the application

The concept of the application was clear to me. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

It is easy to understand the features offered in the application. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The features offered met my expectations of such an application. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

I knew exactly how to do what I had to do. *

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Figure 12: Logged errors in tasks
 Figure 13: Post-task Questionnaire

The organization of information on the application screens is clear. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

It is easy to switch between different tasks.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The icons used in the application were intuitive. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The visual design of the application is appealing. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Figure 13: Post-task Questionnaire

If such an application existed, I'd use it to save time and money and have a good time. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The think such an application has other uses than it's intended for. *

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Age *

Gender

- Male
- Female

Occupation *

Figure 13: Post-task Questionnaire

| Timestamp | The concept of the application was clear to me. | The features offered met my expectations of such an application. | The organization of information on the application screens is clear. | It is easy to understand the features offered in the application. | The visual design of the application is appealing. | If such an application existed, I'd use it to save time and money and have a good time. | The think such an application has other uses than it's intended for. | The icons used in the application were intuitive. | I knew exactly how to do what I had to do. | Age | Gender | Occupation | It is easy to switch between different tasks. |
|-----------|---|--|--|---|--|---|--|---|--|-----|-----------|-------------------|---|
| 12/4/2013 | | | | | | | | | | | | | |
| 12/02/09 | Neutral | Neutral | Strongly agree | Neutral | Agree | Strongly agree | Agree | Strongly agree | Strongly Agree | | 28 Female | UX Designer | Strongly agree |
| 12/8/2013 | | | | | | | | | | | | | |
| 13/03/19 | Agree | Neutral | Strongly agree | Agree | Strongly agree | Agree | Agree | Agree | Agree | | 28 Female | Student | Agree |
| 12/9/2013 | | | | | | | | | | | | | |
| 20/21/43 | Strongly agree | Agree | Strongly agree | Strongly agree | Neutral | Neutral | Strongly agree | Agree | Agree | | 28 Male | Student | Strongly agree |
| 12/9/2013 | | | | | | | | | | | | | |
| 21/25/03 | Agree | Neutral | Strongly agree | Agree | Agree | Agree | Agree | Agree | Agree | | 27 Male | Design Lead & CEO | Strongly agree |

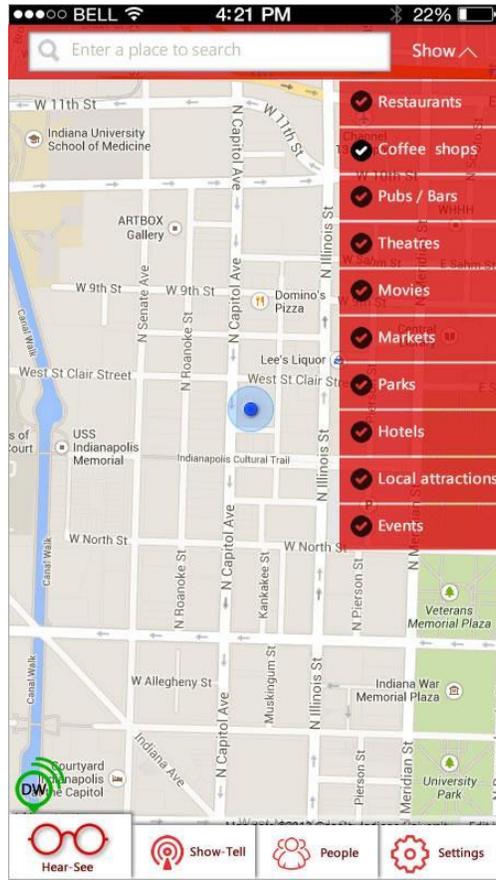
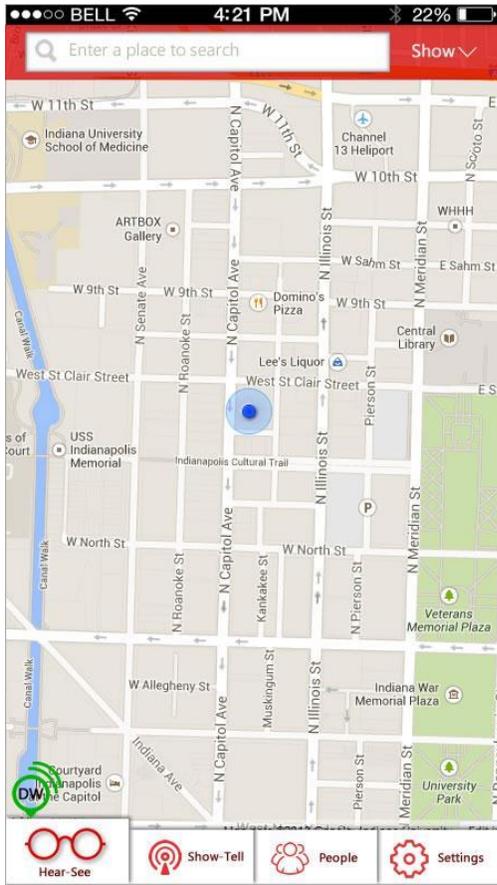
Figure 14: Post-task Questionnaire Results

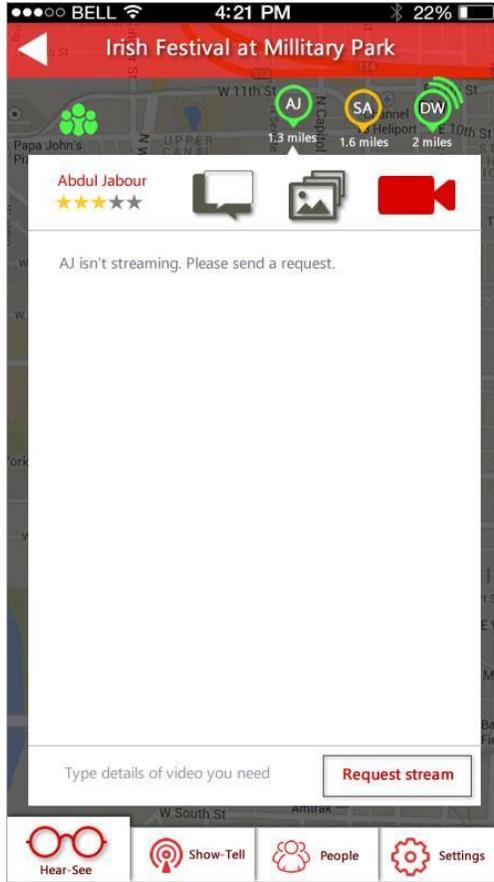
E. Test Subject Profile Information

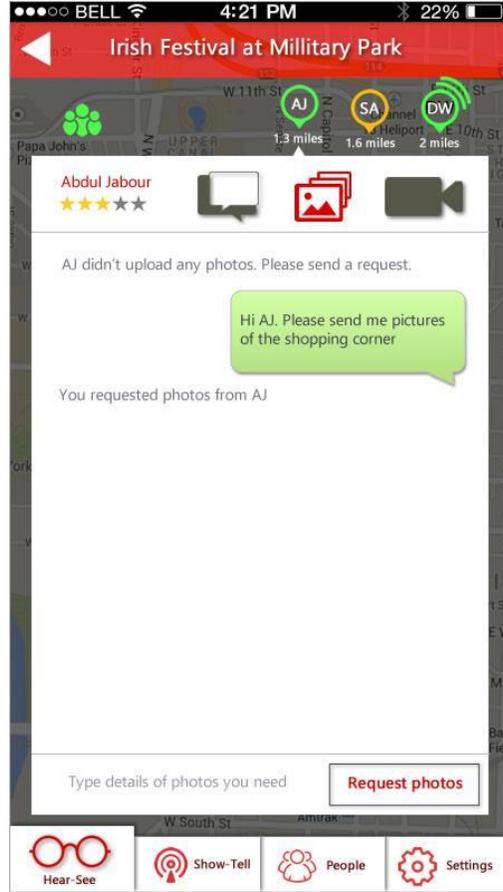
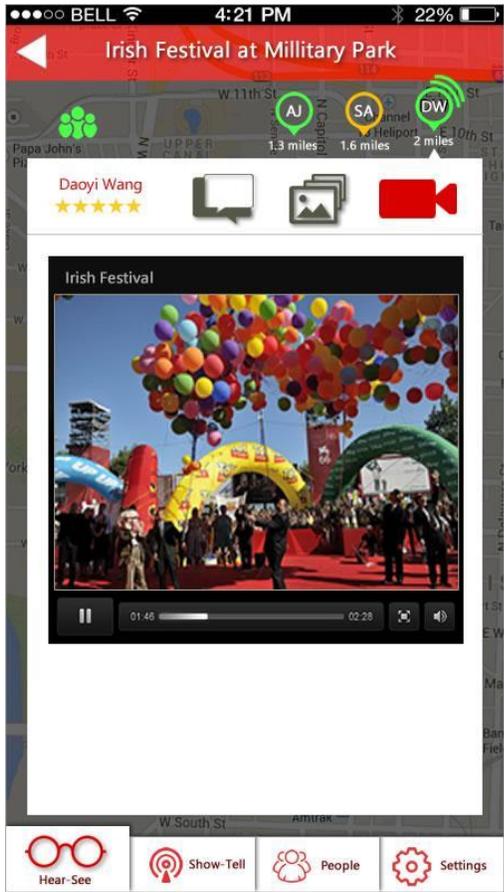
Demographics of Evaluators:

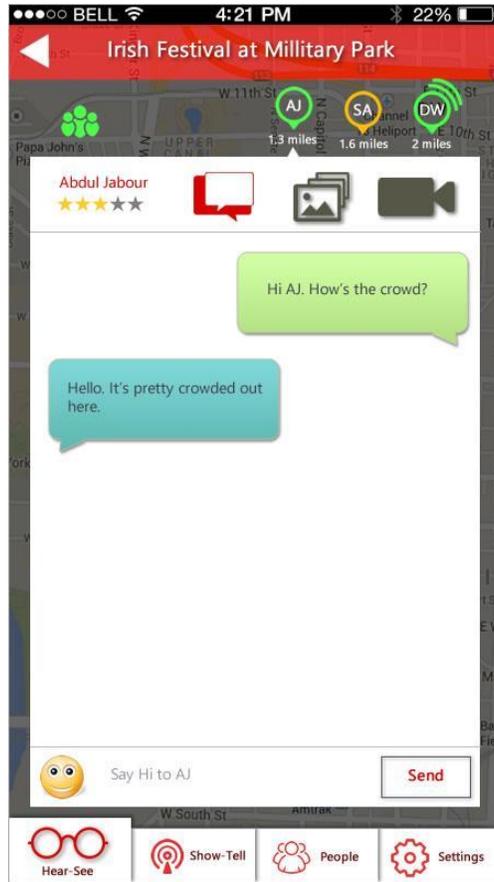
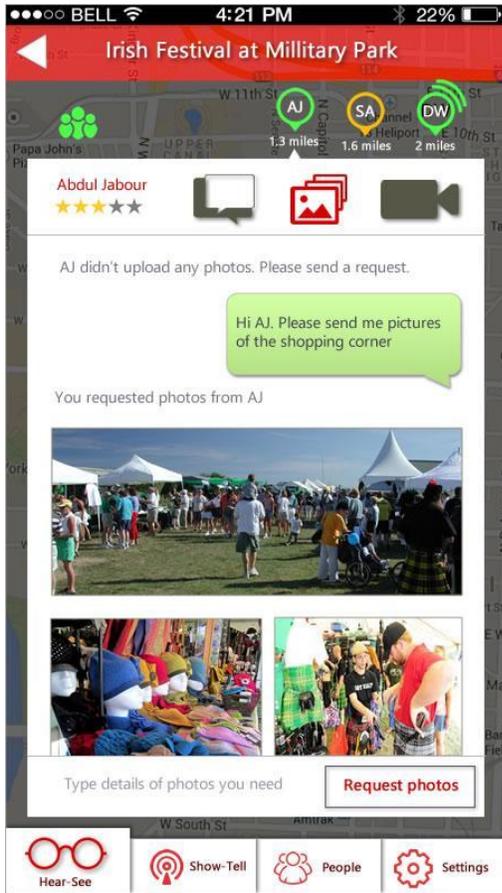
- Senior UX designer, 26, Female
- Design Lead & CEO, 27, Male
- Graduate Student, 26, Female
- Graduate Student, 26, Male

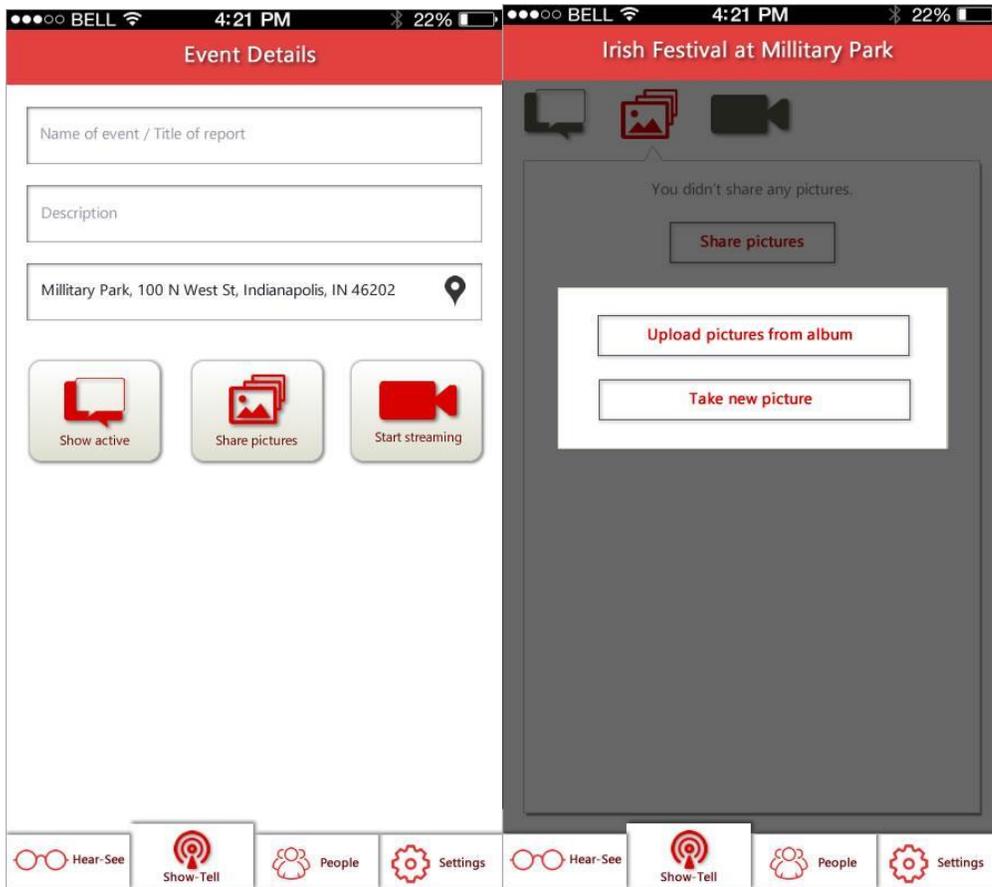
F. Additional Screen Images of Product Interface.

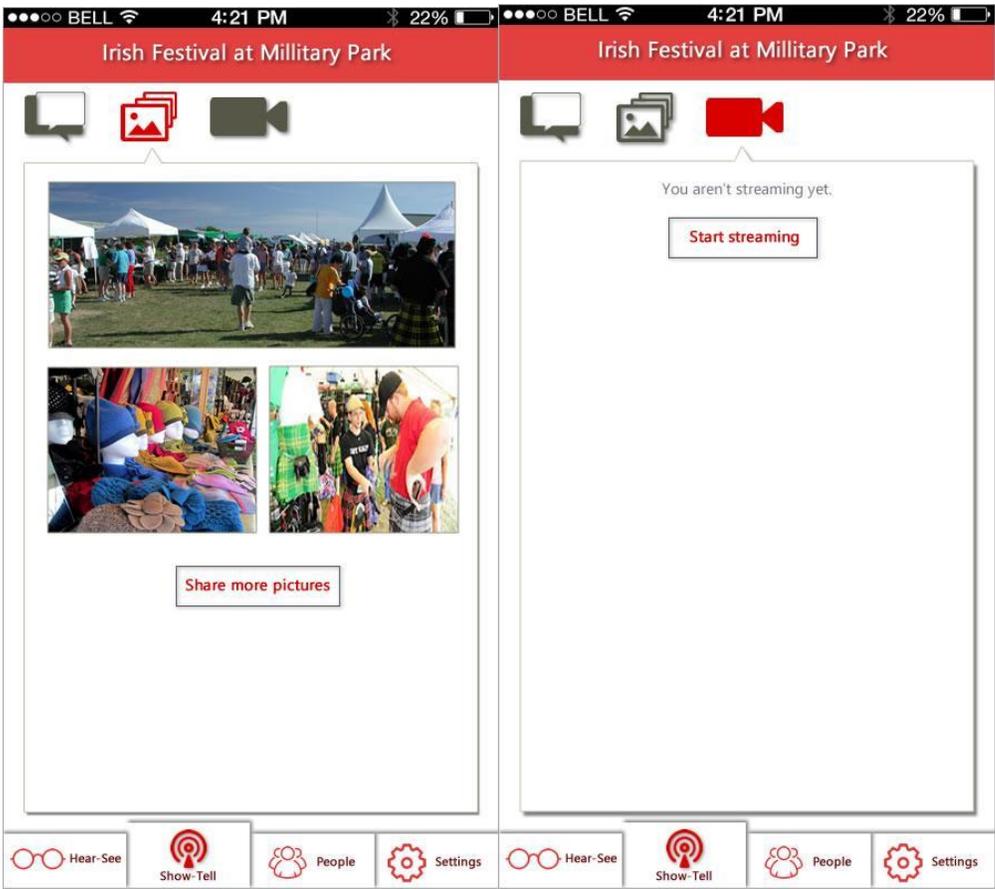












Irish Festival at Millitary Park



Now streaming ●



Stop streaming

Hear-See



Show-Tell

People

Settings

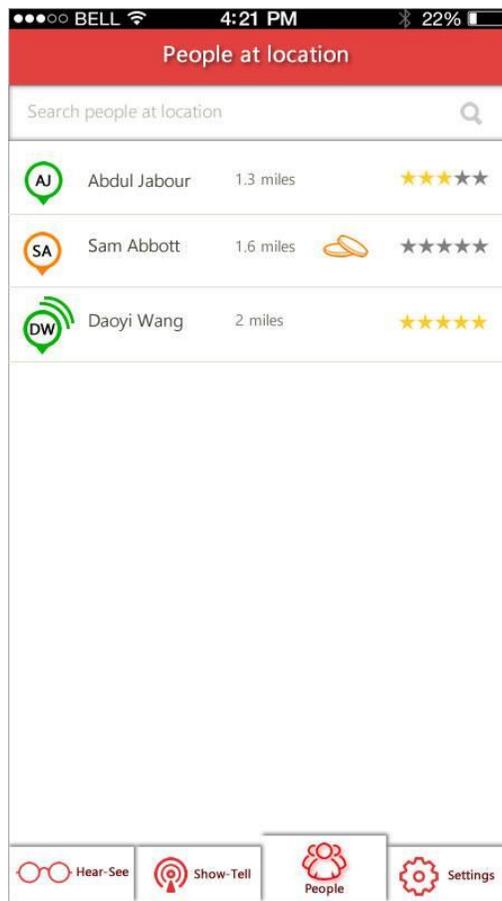
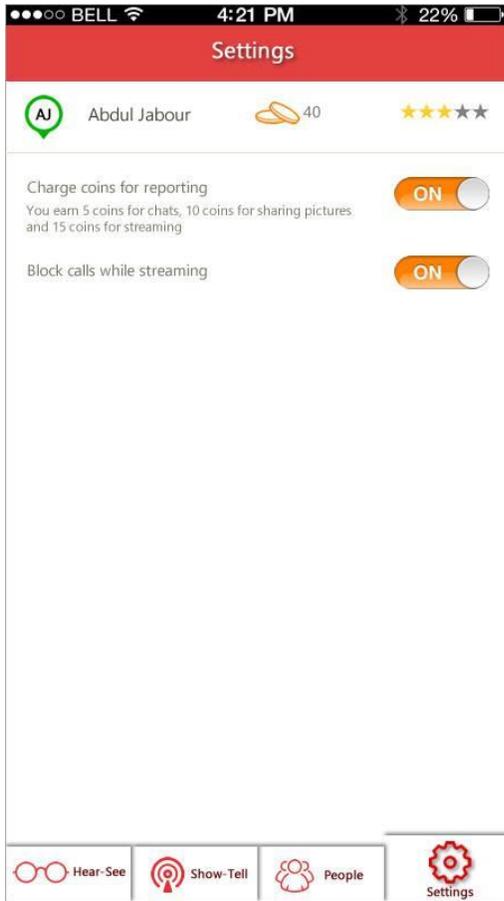


Figure 15: High fidelity prototype

I. Changes made to the Dynamic prototype

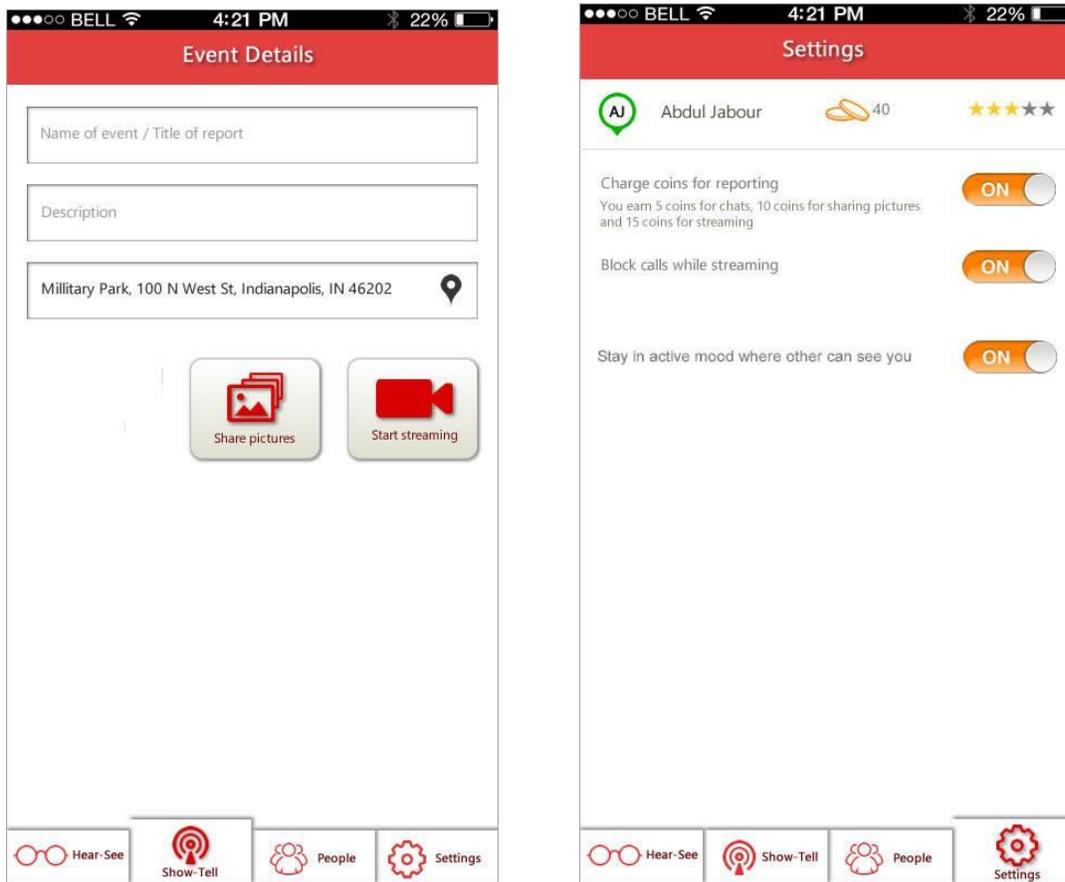


Figure 16: Changes made to high fidelity prototype

V. References

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