Mission Decision: Making responsible decisions while under the influence of alcohol

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ABSTRACT
This paper documents the process of developing a prototype for responsible drinking and making good decision while drunk. We summarize a few papers regarding careless behaviour while drinking alcohol and what makes people feel good about decisions made. The iterative prototyping process is described with feedback and changes from low-fidelity sketches to a hi-fidelity application prototype. The final prototype lets the user submit an activity they want to do, how much they have been drinking and how many friends are with them. This information in combination with the weather, time etc. generates an answer that either approves or denies the user's activity. We believe that this application would help our users make better decision while drunk.

Keywords
Leisure; responsible design; drinking; interaction design; user tests.

INTRODUCTION
Leisure is defined as "freedom from the demands of work or duty"[2] and can be interpreted differently by different people. According to our view, to drink alcohol can be seen as an activity done on one's leisure time. The purpose of this paper was to develop a design concept for the theme responsible leisure for mobile devices. Responsible design is a design driven by a desire to help the weak or those who otherwise would be ignored by the market [4]. With this in mind when developing the concept, the specific focus is to encourage people to make responsible choices when they have been consuming alcohol. We wanted to do this in a fun and easy way with the help of an application for a mobile device.

Background
In the paper "Anything Could Have Happened': Women, the Night-time Economy, Alcohol and Drink Spiking" they examine discussions surrounding nighttime economy spaces relating to leisure and consumption. When consuming alcohol the majority of the women thought they were less aware of their own safety due to lowered inhibitions and increased confidence which consuming alcohol gave them. Women outlined multiple 'stupid' or 'risky' situations, which they had found themselves in when drunk. [5]

Another study shows that alcohol changes the emotional processing in the limbic system and the visual regions. This leads to decreasing abilities to see the difference between threatening and non-threatening actions. This may contribute to suppressed feelings of anxiety and to make riskier decision making while being drunk. [3]

One study examined in the paper "Regret in decision making" concerning students showed that people might feel more regret if a decision was made by themselves compared to if it was imposed on them by e.g. a computer system. Another study showed that if a decision was well justified, less self-blame was generally felt regardless of the outcome. When subjects were asked to rate justifications, one of the best general-purpose justifications was that one made a careful, competent decision based on a wide range of input information. [1]

THE DESIGN PROCESS
Initial design
To start the design process we conducted a brainstorming session to generate different concepts that could help to identify responsible design for leisure activities. The hardest part was to combine responsible design with leisure because they have a contradictory nature. The brainstorming session was also to find appropriate target groups for the concepts. This session resulted in having three different concepts, which was sketched out as low-fidelity prototypes. They were all related to responsible drinking and how an application could help people who have been drinking alcohol.

The first concept was to help people get home safe. It is an app that can notify friends by text message if the user is straying from their regular way home after a night out. The second concept was an app that could detect substances that should not be in drinks. It would come with a stick attachment that measure the drinks content and visualizes if it has been spiked with drugs or not. The final concept was to create an application

that could decide if an idea was good or bad when the user has been drinking.

These concepts and studies were presented at a critique session, where the rest of the students and teachers in the course had the chance to give feedback. The feedback generated was mostly concerning details that were not thought of yet and existing products that could give further inspiration to the concepts. In this stage of the design process we decided to develop one concept further, the one regarding decision-making. This was because it was the most original idea and did not have similar characteristics to existing products. At this stage the application would request the user to input what they want to do, how much they have been drinking and how many friends they are with.

Iterative user tests and prototyping

At this point we started user testing to see what potential users thought of the concept and the low-fidelity prototype that had been developed. This prototype was tested on one person. He was positive to the idea and thought it was needed for people who have been drinking. He also thought that the application's decision should be written from the perspective of someone famous or someone the user could relate to like their mother. He also said that it is important to have funny answers because if the user only gets a "no" the app would not be used by anyone.

After we received the feedback on the low-fidelity prototype the first version of the hi-fidelity prototype was created in the prototype tool JustInMind. This was more or less a clickable version of the low-fi prototype with the exception of a small change in the formulation of the answer. "James Bond" was added as the person giving the advice in the answer to make it more humorous because of the given feedback. The prototype only gave the user the possibility to input one task, which was "go swimming".

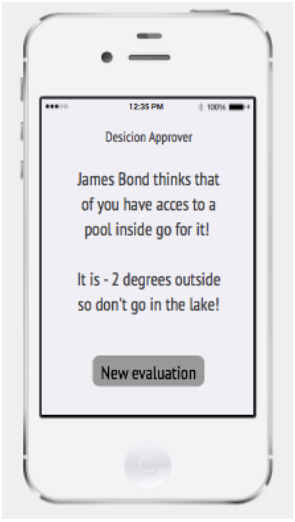


Figure 1. The first version of the hi-fidelity prototype.

This first version was tested on four potential users with small design changes between the tests. Some of the changes that was made were:

- A darker background-color so the text would be easier to read both in the dark and by people with lack of focus.
- Color change on the plus and minus symbols changing the amount of friends because some of the users didn't see them.
- The logo, in the upper left corner, takes the user back to the start page.

Over all the users thought the idea was good and that it was needed, even though one of the users didn't think he needed it himself he said that he had friends that could use this kind of application. They liked the simple design for the intended purpose. Other comments included a desire for voice control, suggestions on what to do and auto correct. We didn't feel that voice control would work well in noisy environments like clubs and bars where drinking often occurs and therefore decided to stick with the written version of the application. With suggestions of what to ask the application there is a risk that it would be used to come up with ideas on what to do while drunk which defeats the purpose of responsible design. Therefore the users will only be able to input ideas they came up with themselves. Auto correct is already built in to the mobile phones and the application will make use of this to correct the eventual misspelling by the user.

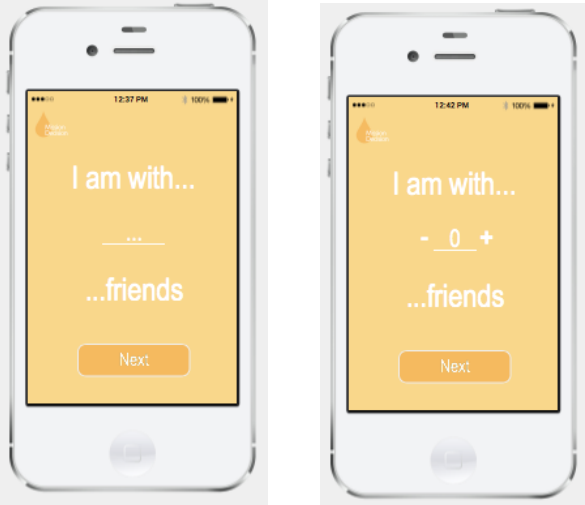


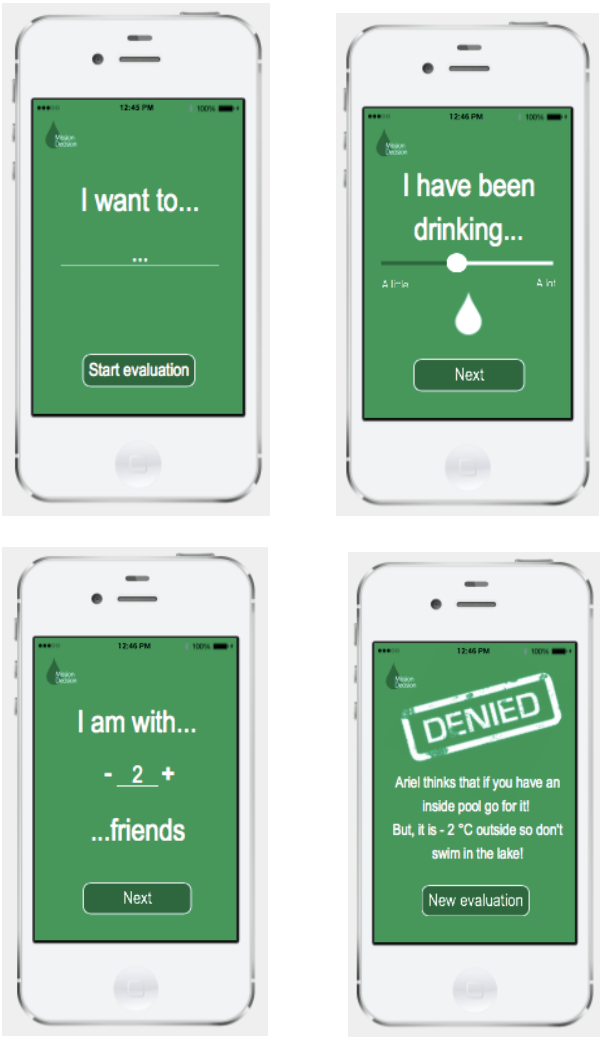
Figure 2. Shows the changes in color over the application and specifically the new way of inputting the amount of friends in the application.

During another critique session this version of the application were presented and some new feedback was gathered in an open discussion. Sound, for reading the answers out loud, were suggested but this has the same issues as voice control and will not be taken into account. The answers in the application were featured as the most problematic issue. Questions like how to decide if an idea should be approved or not and are the answers supposed to be funny or serious came up. Also related to the answer they thought that it should be better visualized in the app if the answer was positive or negative. This last suggestion were implemented in the prototype before the next round of iterations by adding "approved" and "denied" stamps to the answers.

The new version of the prototype was tested on four new potential users with the addition of a new task alternative that included both an "approved" and a "denied" answer depending on the amount of friends the user are with. The new visualization with the stamps on the answer pages got positive feedback because the users said they understood right away if the answer was positive or negative. One addition that was implemented in the final design was based on a question on what happened if the application didn't understand the input on what to do. To solve this another view was added that explained that the input was denied because the system didn't understand it. Over all the users thought the application was easy to use and could be used both seriously and for fun.

THE DESIGN

The final design resulted in the application Mission Decision. The basic concept is that it helps the users who have been drinking decide if an idea they have is good or bad. The decision is calculated depending on three input values: what to do, how much the user has been drinking and how many friends are with the user. The app also takes into account the weather, time, location, public transportation etc. The design is simple because people who have been consuming alcohol should have an easier way to navigate the application and read both the input text and the answer. If the app recommends that the user should not perform a specific task a suggestion will be given on what could be done instead.



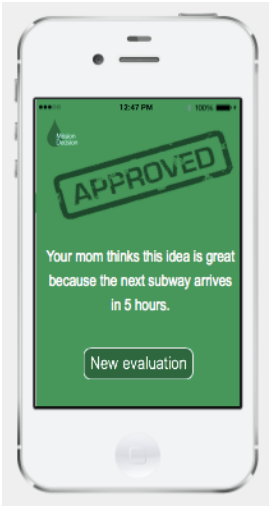


Figure 1. Selected views from the final hi-fidelity prototype.

Why is it responsible?

This application is responsible because it helps users to avoid doing risky actions when they have been drinking. The app takes into account several different values when deciding on an answer to the user. As stated before, people are more content with their decision when they have all the information and have a good ground for the decision. It also gives alternatives on what the user can do if the action is denied and can therefore change the user's mind into doing something safer.

CONCLUSION

After a number of iterative user tests the original concept came to be an application that can be considered responsible design. We believe that using this application can help people make better decisions when consuming alcohol.

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