DECO3850 - Physical Computing & Interaction Design Studio

A3: D4: Prototype Appraisal Report

Team Mars

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1. Gambit

This team designed a project targeting sedentary office workers, aiming to change people's behaviour by providing notifications with animations to encourage them walk around from sitting a long time. However, it might be bit annoying to carry something in hand when walking, because the size of the final product will not be able to put into the pocket. One solution would be considered is to make it wearable on their wrist, which makes it more convenient to use. Another design issue is the sensor used to turn on/interact with the product is not sensitive to use. Sometime it takes multiple times to touch the sensor for getting feedback. There is little sign about how to use it, especially the sensor is unlike other normal switch or button that everyone understands what they should do with it. It might cause confusions when people first saw the product. Instruction could be provided next to those sensor, like which method they can touch to activate the product.

As for usability and interactivity, suggested to consider adding more meaningful responses to encourage target audience rather than just health bar. For instance, you could place a character inside the screen to have further animation, such as the character would die if the health bar goes to zero. At the same time, it may motivate users to do regular exercise for keeping their character alive. Also, you could add more interactions with users, such as adding task which only can be achieved by multiple people.

2. Musical Beats - Team Ladies

Musical Beats offers music with visualization according to heartbeat. Indeed, listening to music is a good way to let audience who is under pressure to get refreshment and connection with others. It is understandable that it needs to be installed in quiet public space because users need to hear the voice clearly. However, some context maybe not suitable, such as library, because people here want a quiet space for study or rest. Please consider about park or museum, which allow to people make noise, but would not distract others.

Unfortunately, the prototype seems like not fully functional during demonstration, so it would be hard to precisely give you a feedback about usability and navigation. Generally, it sure be fine because the system can detect body movements and generate corresponding animation. It is attractive. The problem is that current functions were not integrated and they showed little relevance with the music theme. Just for now, It is an advice that you could enhance sound responses based on users' physical & emotional reaction and take animation as visual support. Not inverted. For instance, the speed of melody could depend on users' movement and frequency of heart beats.

In terms of interactivity, it provides a lovely user journey when people are interacting with each other. They can cooperatively complete a music product. Or, it is probably not obvious when an individual's heart beat slightly changes, but it maybe more interesting to match music with people who has similar heartbeat patterns somehow for engaging them together.

3. Team Exp Sharing

Team Exp Sharing presented a multiplier spaceship piloting which requires four to fly a spaceship and collect resource as many as possible within 15 minutes.

There are four jobs which are equally important in the game and different players with different jobs will need to closely cooperate with each other to work effectively. I really like this setting since it could be very good reason for people to engage. However, it seems like the job weight has not been balanced well. During the demonstration, only the engineer did not have a screen to watch and her only job was just to put the fuel nozzle into the tank and distribute energy, which was a little be tedious to player for 15 minutes. I suggest to add more elements onto the tank, such as a small screen displaying numerical values, lights, sounds and vibration to help the player feel more engaging.

I was also impressive by the usage of Kinect, Wii balance board and Arduino together to build this game, which provides so much fun during the game play. But it seems like the input of the Wii balance board has not been processed good enough inside the Unity engine, which made the weight controlling a little bit fuzzy. It has been difficult enough to communicate with others while controlling, so the control of the game should be easy to be mastered.

4. Team Stilio

The flask provides an emotional-care installation at home to enhance home solicitude. It targets individuals at home and understand the emotion of each other.

Although its design is obvious to display different emotions through the color dots, it is still lack of representing the level of these emotions, like how happy or how angry the member is. As well as the shape is quite monotonous with circles only. It would be better to utilise the other shapes to indicate the multiple emotions, such as the triangle means angry, the rectangle means upset, etc. Besides, the combination of different colors and shapes might be more recognisable for users.

For the usability and navigation, the flask with home usage in daily life may confuse the first-time users how to use it. Therefore, providing the guides of colors and shapes may help to avoid misunderstanding. Except these, the interactivity merely exists in people tossing the emotion representing items inside the bucket. It is suggested to put more interactions, like sound addition in the meantime with the item arrived in bucket. Another suggestion is considering individual identifications. Since the flask is anonymous, they don't really know whose feelings. The problem might happens when two opposite emotions inside the bucket (eg. happy & sad). It is hard to distinguish who felt happy and who felt sad, or one person felt happy first and then felt sad later. So, it is suggested to provide a series of identical emotional representations, or separate the bucket for each member.

5. Hell's Kitchen

Hell's Kitchen is designed for kids to teach them make a pizza step-by-step through the game, with highly coincidence with their theme "Learning through Play". In addition, the materials they selected are almost soft sponge to avoid any unexpected hurts. This game is entertaining to appeal kids to play it, having the usability of integrating the game to learning. As well as its design styles, the most kids are highly likely accept the style on account of the aesthetics of kids.

For the navigation, they provides a normal scenario in their video storyboard. They mentioned washing hands multiple times for health, but they didn't come up with washing the ingredients that is possible to lead some misconstrues. It would be better to explain it neatly.

The interactivity is limited due to the quantity of selectable ingredients. What would help to solve it is adding more ingredients for players, then they are able to create more flavours pizza. It is also able to enhance the communications and work cooperations. Moreover, a small advice is preparing instructions. One is the workflow of making a pizza, choosing the ingredients first, then the sauce, etc. Did you hear about the Subway? The subway always ask customers to choose bread first. Another one is the popular recipes to provide the common ingredients collocation of pizza for inspiration. However, the players are allowed not following the recipes to make "wrong" pizza, which motivates their creative abilities in the meanwhile.

6. UMAT - Team Tree

UMAT is a lager musical mat designed for helping children aged 6-8 to experience with music. They did very well on designing for their target audience. Mat is commonly used in kids' space and it is a soft material, so it is familiar and safe for

them. However, the detectability of current prototype seem like not function perfectly unless player press very hard. They can fix this technique issue later.

Additionally, it could be too late and easy for these kids merely learn how to distinguish different sound of instrument. It maybe more appropriate for providing slightly challenging music skills and knowledge.

For navigation, the interaction plan is simple and easy to use because kids could learn to use this system very quickly, but simple game rules might cause low interactivity. It is a suggestion that multiplayers game setting can be considered. Do you know DJ? Just thinking about many kids play music together. Each player control one type of instrument and each one's path can be visualized by a certain color of light. Then, they need to mix music by cooperation.

For usability, various functions, such as sound and light, were well integrated. Using cartoon pictures and lights is a useful approach for grabbing kids' attention. However, it might be confused because it is inconsistency. Kids are likely seeking to regularity according to shape/color, but there is no relationship between shape/color and its sound. Perhaps, using the same shape/color or transparent mat would minimize their confusion.

7.Connected

Team Connected presented a lovely way to share secrets. I pretty like the concept of listening to others secrets to find the sense of integration in a society, which could make users feel happy, safety, engaging when finding someone similar to themselves. However, if the user could not find someone similar, this could make him/she feel lonely or unsafe on the other hand. So, I suggest that you can let users to share their secrets before they listen to others'. You can train the AI in your system to categorize the recorded secret and lead the user to the area with all the similar secrets.

Feedback for the current prototype. Firstly, I was impressive that you have achieved voice control for your project. But considering places you intends to apply your product, which are places with many people, voice control seems not really appropriate since those places could be very noisy and many people talking. Secondly, the flower was very pretty. However, according to your concept, the flower should "flow" on the simulated water. So, how to make it "flow" is the question. I recommend to put wheels under the flower. Thirdly, the simulated environment currently is projected from the top to the ground. As a result, if you put a flower on the ground, the scene will be projected on it, which doesn't match the concept of

“flowing on water”. So, I recommend to have a look at the method the team Fruigie used to project their scene.

8. Fruigie

Fruigie is an education-oriented game that allows children get to know different fruit name and it’s type through playing the game. It shows a cute and beautiful interface, which helps user to get start easily and engage with the project. However, pentagonal prism at the side makes it become hard to place card boards on the desk. It is suggested to move it to another end or make it with same level as the desk in order to make it become more friendly for the users. Colors and different shapes can be added for those cards as a hint. The reason is once the card number increase, it possible become difficult for children to find the card they expect. Moreover, sound effects could be applied to the game. To be more specific, if the user place a carrot card on the desk, it will play sound “carrot” at the same time. It might help children learn not only the name, but also the pronunciation as well.

To engage the target audience, cooperative or competitive tasks among groups could be added into the game. Accuracy and efficiency of complete the task could be used to justify which team will win the game. It would motivate player to interact it for multiple times actively, as well as help them acquire more knowledge through playing.

9. The Untold

The Untold as a secret sharing project, provides an opportunity for people who are willing to share their emotions. At the same time, this project keeps their secrets and only indicate the emotion in different color to the listener. It showed a disadvantage that it can only have a fixed time of recording, which might not reasonable for a secret sharing project. The recording time could be more flexible. You may consider the tones as well, because in some occasions one sentence might have different meanings due to the different tones. Another suggestion is providing a comfortable space that is enclose and isolated for user to share their stories. It might encourage user to share their stories.

Different colors are used to display user’s emotions, but misunderstandings might happen because it is the only information that will be received by listeners. In order to solve this problem, level of emotions could be distinguished by color shade .For example, deep red and light red will indicates different level of angry respectively. Also, the picture or word that relate to secrets could be displayed on the screen.

Then, the listener would have a clue about secrets, thereby reducing the misunderstanding between users and listeners.

At the same time, navigation needs to be more clear for this project. It may needs to guide users which button they should press with in each steps. Also, a brief description could be provided on listener’s side, so they would get start with the interaction more easily.