LOW-FI PROTOTYPING

ASSIGNMENT #3B

ALICE IN IoT

We'll take you to Wonderland

Team members : 唐子翔、賴楨璿、楊一、吳怡潁、裘娜娜、顏睿楠

TABLE OF CONTENTS

INTRODUCTION

To study, the major, if not the only, true profession of a teenager. This aspect takes up considerable priority in the lives of teenagers all over the world. However, with the internet and all, we know it has become increasingly challenging to keep your "head in the game" or in other words, focus and keep distractions in line. This is where we identified a need for smart tools that can both seamlessly blend in to the typical teenager work environment and aid in the divergence of distractions. In this report, we present our further steps in the design process of our solution to this problem. We go on to define our mission statement and present our design sketches, along with the storyboarding of three of our prototype's main tasks. Furthermore, we wish to highlight that the pilot usability testing results have not been included in the present report because we still have to sort somethings out of the low-fi design in order to properly carry out trials. Testing results will thus be presented later.

MISSION STATEMENT

To help teenagers focus and concentrate while studying by providing an optimal environment through sound and at the same time keeping pets entertained.

VALUE PROPOSITION

Alice is your best study companion, she helps you keep the concentration mood going on for when you are preparing for those exams. She'll play music, ambience sounds, remind you to rest when you get tired and even play with your pet while you're studying.

PROBLEM

Distractions are now not only more in number but also more prone to conveniently pop out even when we are trying to study. Computers are now akin to libraries, we inevitably use them to study; in many ways Google, YouTube and the like all are study tools with a very thin line separating study and leisure. How can we eliminate the distractions without actually leaving

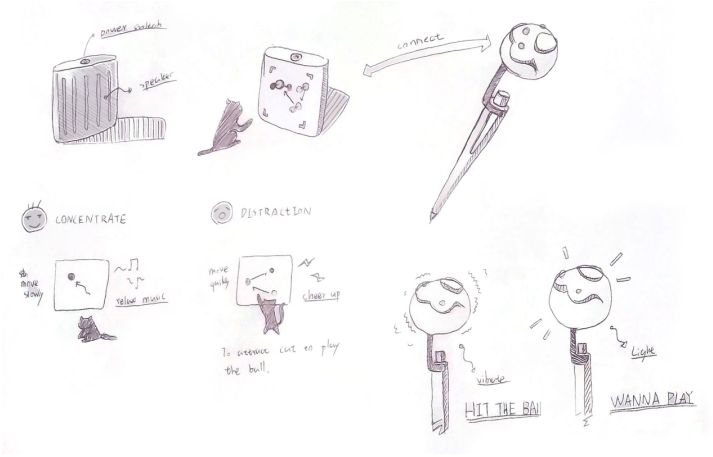
these tools out of the picture? Also, for those teenagers with pets, spending most of time in school and the rest of the time studying might leave quality time with pets out of the picture. Is there any way we can use our current solution to address this issue as well?

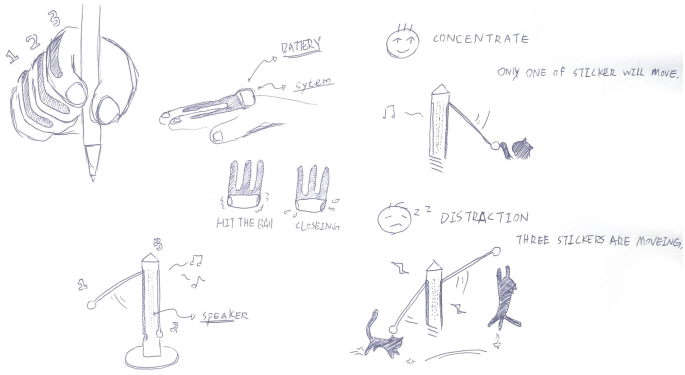
SOLUTION OVERVIEW

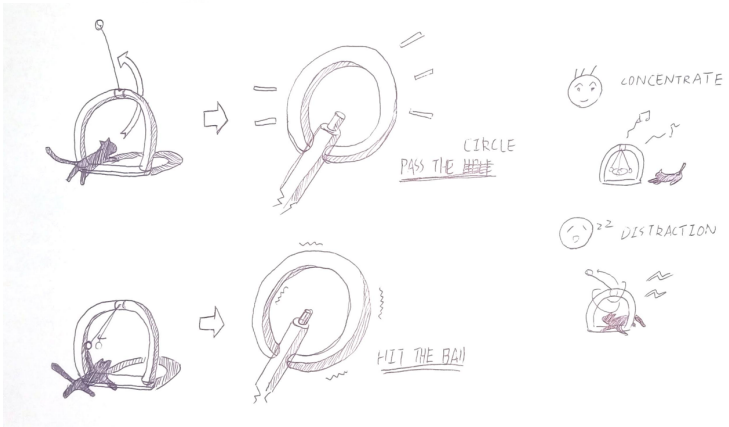
Our design tackles 2 problems in one, it is versatile and equally helpful on both spectrums: pet caring and ambience. It manages to both create an environment and at the same time provide a way to entertain your pet, thus creating a feedback loop where the user can both benefit by having a pro-concentration vibe and at the same time be sure the pet is being taken care of, at least for a while. At the same time the user can use some of the suggested resting time to play with the pet and come back to studying later. This creates a smart framework where the teenager can just be led by our system, trust it in a way that he or she will be sure that it adjusts to his or her own specific needs.

SKETCHES

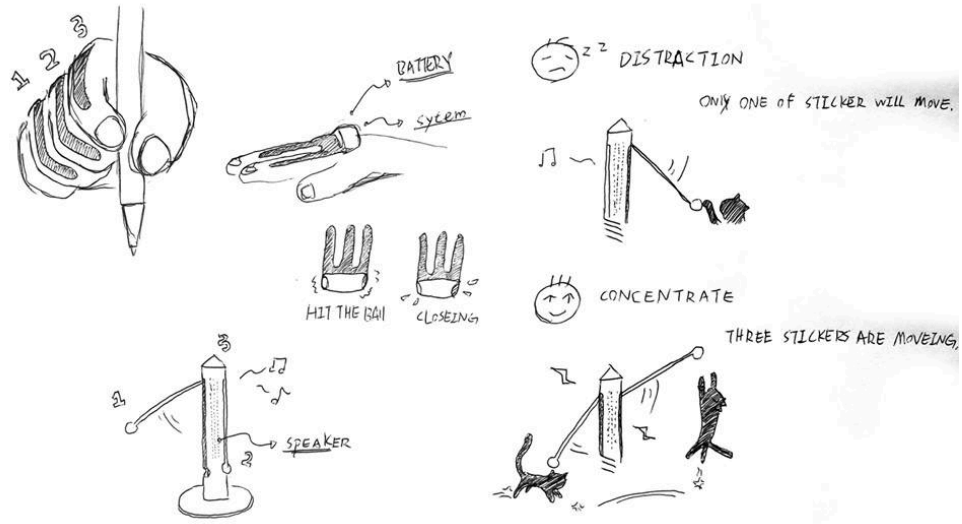
OVERVIEW







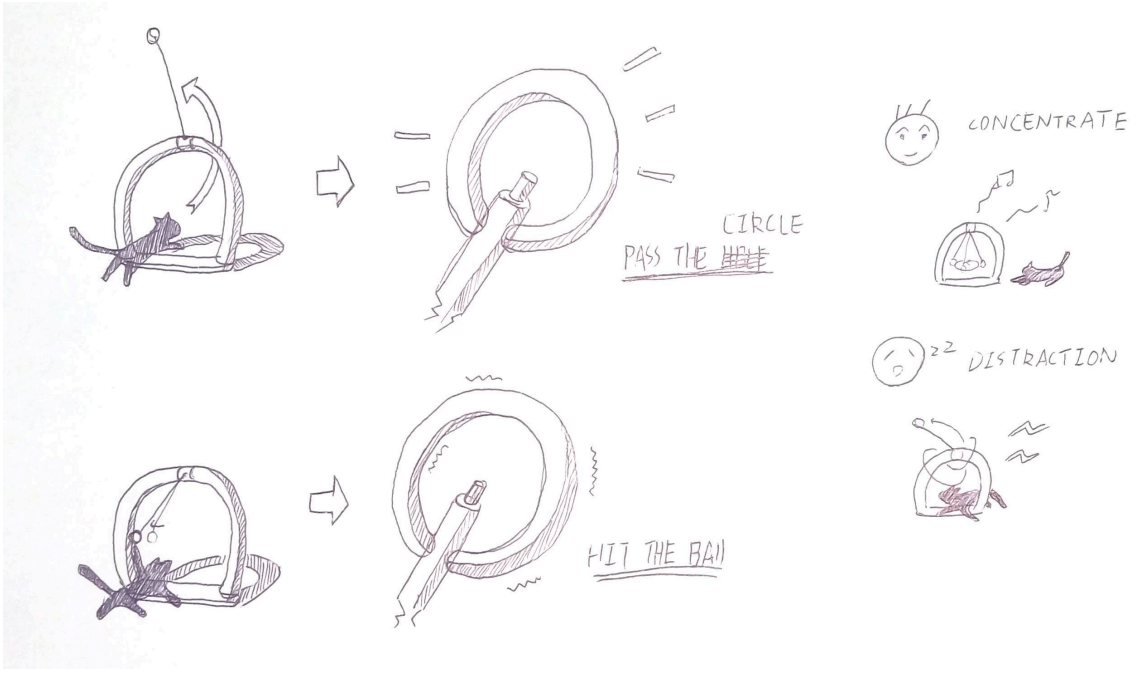
SKETCH#1



HOW IT WORKS: Design #1 works by attaching sensors to the user's hand. The movement of the hand will make the ball on the speaker, which is the cat's toy, move accordingly with the hand gesture. The speaker will be attached to the ground for safety.

When the user is concentrated, we assume that the hand will move dramatically, or at least regularly. For mutual feedbacks between the user and the cat, the sensor will collect these information, and transmit the data to the pen. The system will determine that the user is being concentrated, so the toy will move dramatically to keep the pet occupied, so that the pet will not come and bother the user. Oppositely, the toy will move smoothly, and the cat will soon lose interest in the toy and head for its owner who is starting to doze off.

SKETCH#2



HOW IT WORKS: Design #2 works by sensing motion from a pen, which can remotely control the speaker by internet as well. The speaker has a different design but also features, attachment to ground.

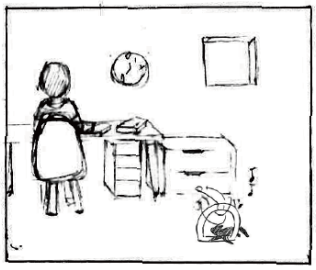
When the user is concentrated, we assume that the pen will move dramatically, or at least regularly. For mutual feedbacks between the user and the cat, the sensor will collect these information, and transmit the data to the speaker. The system will determine that the user is being concentrated, so the speaker will play soft music to keep the pet occupied, so that the pet will not come and bother the user. Oppositely, the speaker will play loud music, the cat will then be shocked and leave to head for its owner who is starting to doze off.

SELECTED INTERFACE DESIGN

TASK # 1 – distracting your pet

Storyboard - Cat Toy
Take DigiSticker interface for example

1

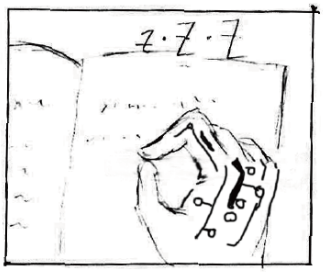


Beging studying, pet should away from users in order to disturb they study.

2

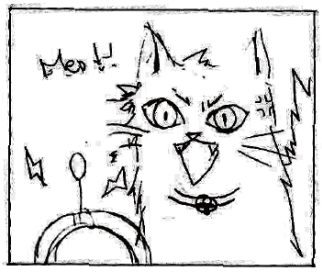
So the Cat Toy would automatically moving with quick-rhythm music to attract cat attention.

3



The DigiSticker will detect the frequency of the hands- moving and delivering these data to the Cat Toy. While user feel tire, they will wright slowly. DigiSticker will collect data and send it out.

4

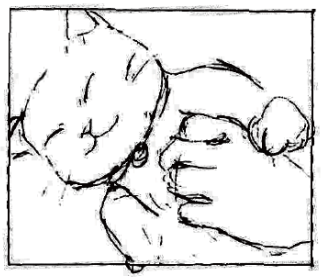


When the DigiSticker recieve low-frequency data of wrighting, the toy will move slowly and play more positive-loudly music to make cat having no interest in the toy.

5

While cat feel bored and user got tire, cat will go to find user for asking anything what they needs.

6

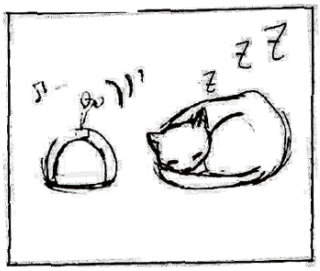


at the same time, cat is a symbol to make people out of the bad status instead of interuption.

7

After relaxing for a while, user keep going to study, the Cat Toy will deliever other data to the installation which will chaange the frenquncy of the toy and the music to more lightful.

8



When user study to the end, the cat toy will move regularly, and paly a peaceful music which will make user andcat feeling relax.

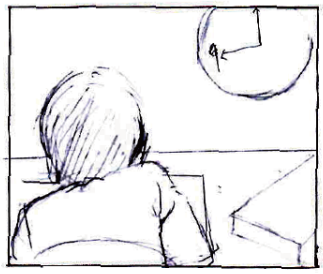
Storyboard - Music Installation

Take DigiPen interface for example

1

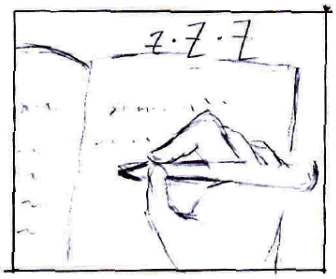
Beging studying, and it will play a quick-rhythm music fit person's statuse by the unstallation.

2



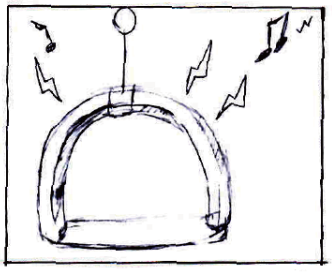
They are used to study for a long tine.

3



The DigiPen will detect the frequency of the pen-moving and delivering these data to the music installation. While user feel tire, they will wright slowly. DigiPen will collect data and send it out.

4



When the music installation recieve low-frequency data of wrighting, it will play more positive and loudly music to encourage user.

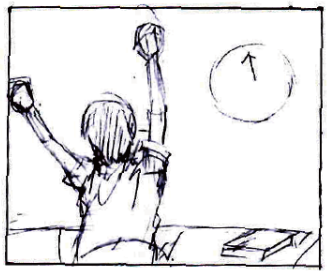
5

When user hear the positive music, they will wake up and restart to concentrate studing.

6

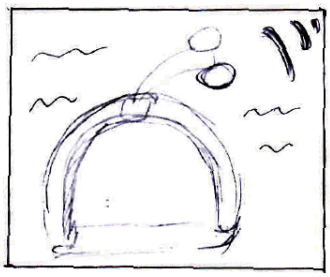
User keep going to study, the pen will deliever the hight-frenquency data to the installation which will chaange the music to more lightful.

7



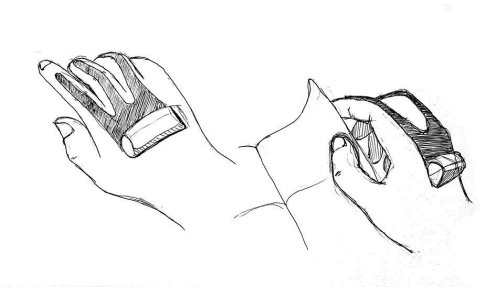
When user had studied too long, the DigiPen will deliever others data to the instalaltion which will determine user need to end the task.

8

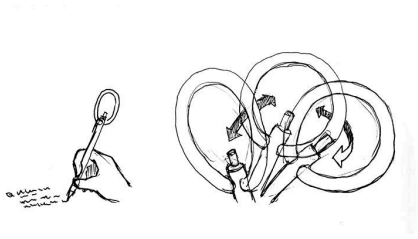


When they study to the end, the installation will paly a peaceful music which will make user feeling relax.

Reasoning for selection



Interface for design 1



Interface for design 2

We chose these as our interfaces mainly because we want to prevent the cat from disturbing the user by applying the productivity sensing system. Both of these interfaces are related to the state of the user, in other words, whether he/she is being productive, to decide what kind of feedbacks the pet will receive. For the first interface, the feedback is transmitted from the toy; as for the second interface, the feedback is transmitted from the music.