

## In-Depth Activity

These days, timepieces (such as clocks, wristwatches, and so on) have a variety of functions. Not only do they tell the time and date, but they can speak to you, remind you when it's time to do something, and record your exercise habits among other things. The interface for these devices, however, shows the time in one of two basic ways: as a digital number such as 11:40 or through an analog display with two or three hands—one to represent the hour, one for the minutes, and one for the seconds.

This in-depth activity is to design an innovative timepiece. This could be in the form of a wristwatch, a mantelpiece clock, a sculpture for a garden or balcony, or any other kind of timepiece you prefer. The goal is to be inventive and exploratory by following these steps:

- (a) Think about the interactive product that you are designing: What do you want it to do? Find three to five potential users, and ask them what they would want. Write a list of requirements for the clock, together with some usability criteria and user experience criteria based on the definitions in Chapter 1.
- (b) Look around for similar devices and seek out other sources of inspiration that you might find helpful. Make a note of any findings that are interesting, useful, or insightful.
- (c) Sketch some initial designs for the timepiece. Try to develop at least two distinct alternatives that meet your set of requirements.
- (d) Evaluate the two designs by using your usability criteria and by role-playing an interaction with your sketches. Involve potential users in the evaluation, if possible. Does it do what you want? Is the time or other information being displayed always clear? Design is iterative, so you may want to return to earlier elements of the process before you choose one of your alternatives.

Name: Zebo Xiong

NetID:

(a) Answer:

- 1) I want the timepiece can help improve peoples' life such as wake up in time, sleep early and spent less time in front of the computer and iPhones, etc.
- 2) With three interviewees, the ideas are as below:
  - Maybe some rules with the gadget. If can check-in in good time, user can get some bonus
  - Timepieces software which can be used in computer
  - Timepieces pillow with alarm
- 3) According to the criteria, we make some requirements:

(effectiveness)	There should be some rules or mandatory which force users to keep a good pace of life – and reduce the time with computer. For example, the penalty rule - if do not wake up in time, the timepiece will charge you money and it is not refundable within one year.
(efficiency)	Should be very handy – users do not need to do extra steps to get influenced by the timepiece. It should be somewhere along with our body or living room or ketch or even restroom, etc.
(safety)	Should be chargable with cable but there is no way to separate the timepiece. Also, there should be alert when temprature is high

(utility)	Multiple functions
(learnability)	At most 5 buttons
(memorability)	There will be a way to memorize some settings for different scenarios

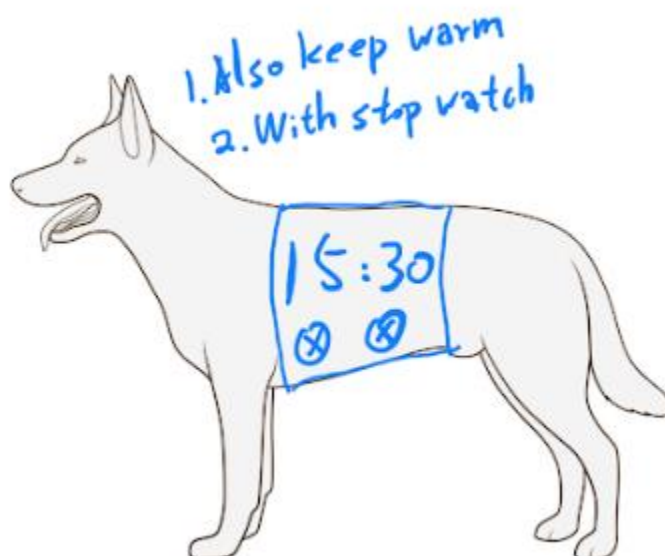
Helpful	Can give effective reminder to user to sleep early
Fun	Use some good music or voice
Enjoyable	Pressing the button can be very comfortable
Sociability	Connect to friends' device and know other people's wake up time
Motivating	A small screen displaying helpful information

(b) There are several items inspired me:

- 1) The cup with changing color
  - The color change with the temperature and when the water is too hot, the cup turn into very red
- 2) The pillow which help people having better sleep
  - The pillow which made with special materials may help people having better sleep
- 3) The timepiece embedded in the table in kitchen
  - For the house women who cook a lot. The timepiece embedded on the workspace, with big digital and alarm, can help them better control the time
- 4) The timepiece on the cat's cloth
  - It is fun and it is also indicates a time which remind people maybe it is time to work now
- 5) The clock with an owl
  - With more visualized object, to remind people
- 6) The timepiece in clothes
  - An anytime design, can easily get the time.

(c)

- 1) The timepiece on dog's cloth on winter



2) The timepiece on kitchen's worktop with timer, which embedded into the table.



(d)

1) Evaluation for the timepiece with dog:

- Effectiveness: when you run with your dog, you can check with the stop watch; also it will remind you when the time is more than certain time limits.
- Efficiency: Will make the cloth easy to wear and easy to detach if not need; Also make the cloth light and have plenty of hole to make it cool in the summer
- Safety: Just a chargeable device with very low electricity use
- Learnable: with two button and it is easy to use
- Memorability: It has the setting to memorize the last time's setting; For example, how long you want to run and how many miles you want to run, etc.
- Helpful: it is definitely helpful and the dog also will get exercise when you do
- Sociability: when it connects to WiFi, it will upload your and dog's data to cloud – help you monitor your health

2) Evaluation for the timepiece on the worktop:

- Effectiveness: It also has a timer – and embedded in the top. It means it will not inconvenience your kitchen work such as cutting meat, and boil some soups etc.
- Efficiency: because it is just beside the table, you can easily control the time
- Safety: it is just using low electricity and isolated from the stove
- Learnable: also with two to three buttons, with a YouTube instruction video which can teach user how to use it effectively
- Memorability: It has the setting to memorize the last time's setting; For example, how long you want to run and how many miles you want to run, etc.
- Helpful: It will help user to cook something which last longer such as 10 – 20 minutes and user need to wait besides. With the timer, user will be notified.
- Pleasurable: The timepiece will give certain quite music which make the cooking more enjoyable

The time will be clearly displayed with digital numbers. And since it connect to WiFi, you can even give more personalized setting such as music, alarm, timer, etc.