

HCI-D Lab. #5 Report

Muscle Beach: Where we build muscle.

Teammates

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Project Domain

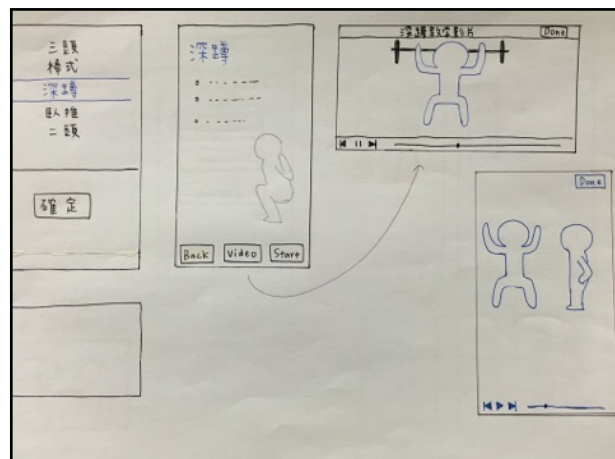
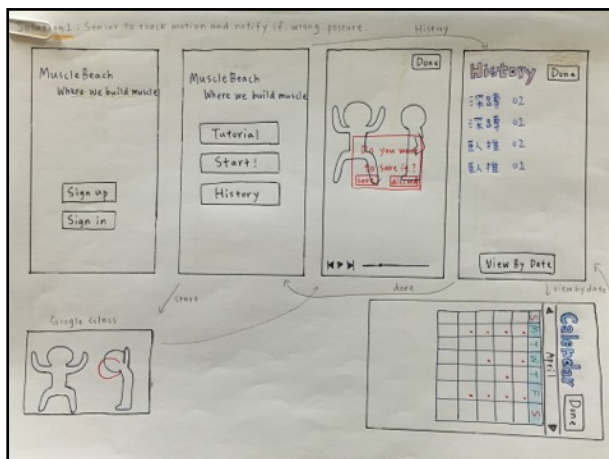
An app that helps people keep on staying fit and work out even efficiently.

Problem / Solution overview

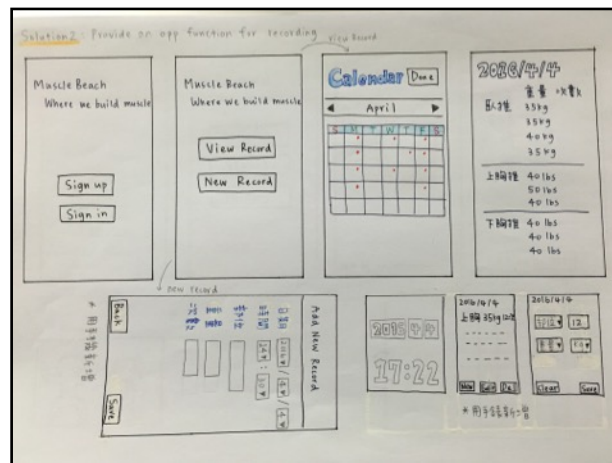
- HMW provide constructed information?
 - Track the users action and notify them if they do sth wrong.
- HMW help them record their results and share it with friends?
 - Provide an app function which can let them record what kind of training(and how much for each kind) they have finished.
- HMW help them stay motivated?
 - Set up weekly goals for themselves and create a cumulative reward if the user reach the goal (daily / weekly).

Sketches and Storyboards

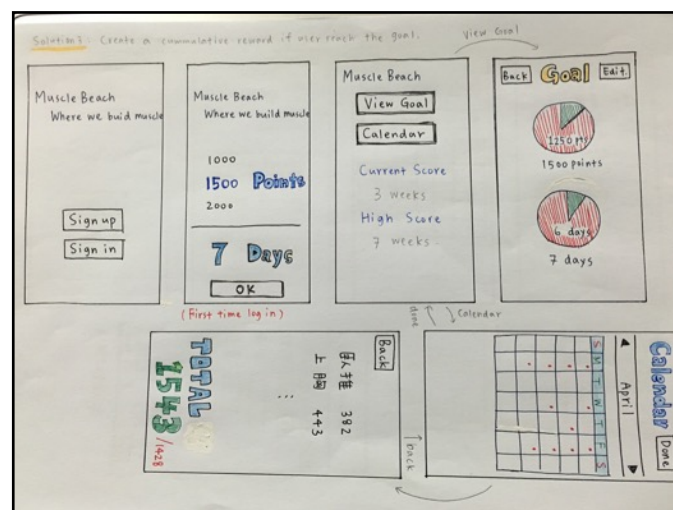
Solution 1: Sensor Tracking



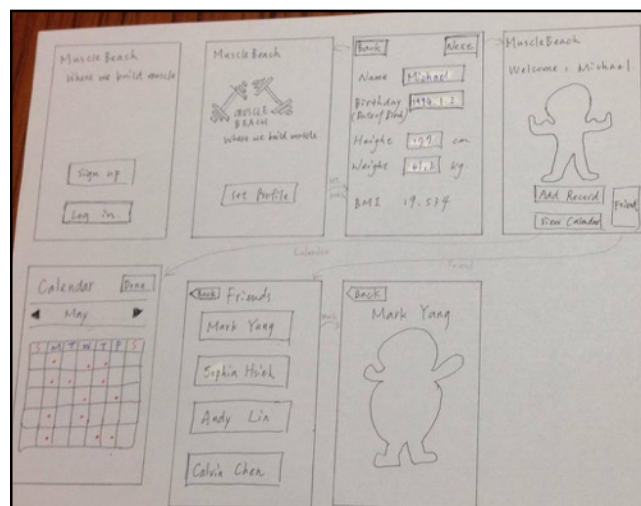
Solution 2: Workout Recording



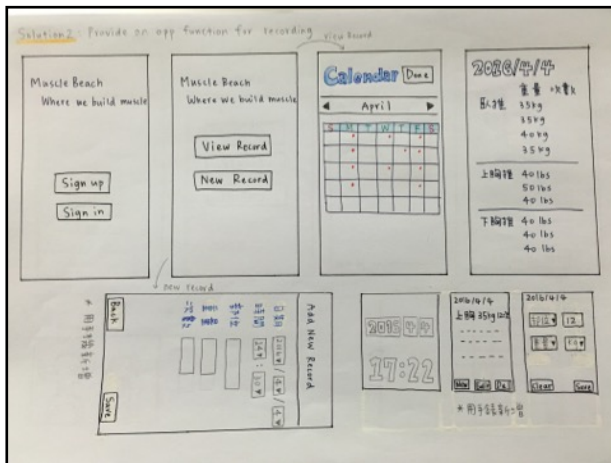
Solution 3: Reward brings Motivation!!!



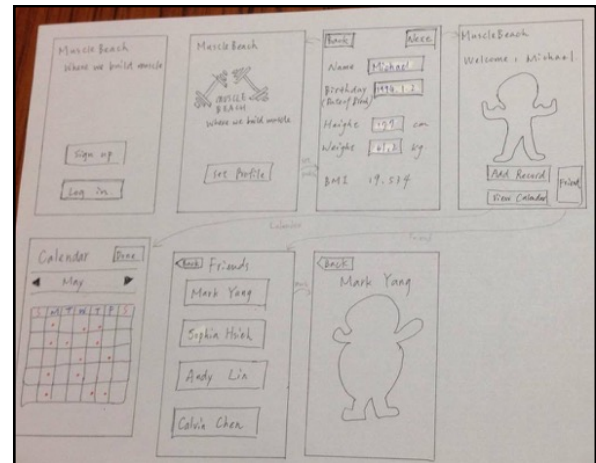
Solution 3-2: Reward brings Motivation!!!



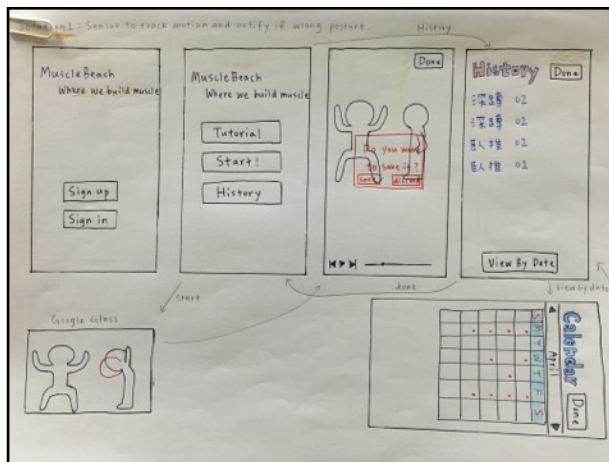
Selected Interface Design



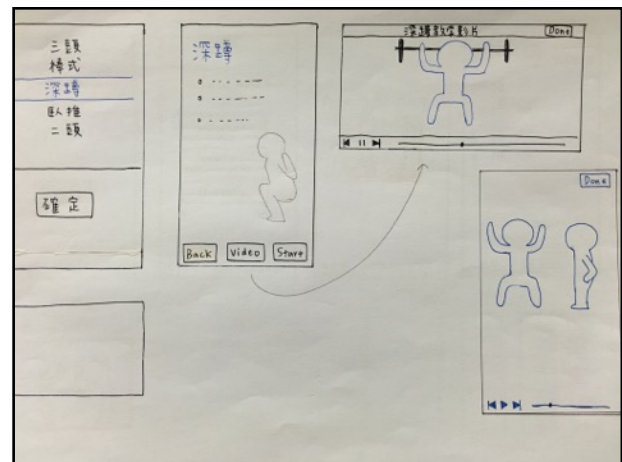
Simple Task:



Moderate Task:
Set the goal and workout with



Complex Task:
Learn from the tutorial video and



Reasoning for selection:

- Cover our problem domain and all the solutions, suitable for both beginners and intermediates.
- Help beginners to start the work easily and intuitively
- Provide an simple method to record the workout.
- With the records, app will predict which body type the users may become and share it with friends.
- Real-time adjusting videos to correct postures.

Prototype Description

Simple Task: Record the training

- With the aid of smartwatch, the user can easily manage the records during the workout.
- The smartwatches' accelerometers can automatically detect the motion and write the record.

2016/4/4

部位▼ 12

重量▼ kg▼

Clear Save

smartwatch

Calendar Done

April

S	M	T	W	T	F	S

2016/4/4

	重量	次数
卧推	35kg	
	35kg	
	40kg	
	35kg	
<hr/>		
上胸推	40lbs	
	50lbs	
	40lbs	
<hr/>		
下胸推	40lbs	
	40lbs	
	40lbs	

Moderate Task: Set the goal shape and share with friends

- Users can set his own profile and use camera to scan his shape, and then set the goal shape.
- According to his workout record, app will predict his shape in the future.
- This future shape will be shared to friends, making users willing to keep in shape.
- It will be perfect to find partner to workout and keep in shape together.

MuscleBeach

Welcome, Michael.

Add Record

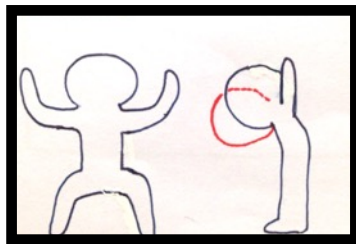
View Calendar

Back

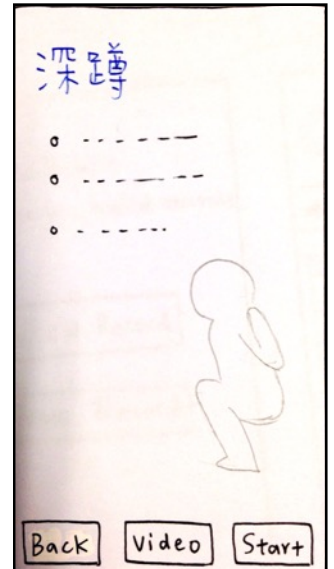
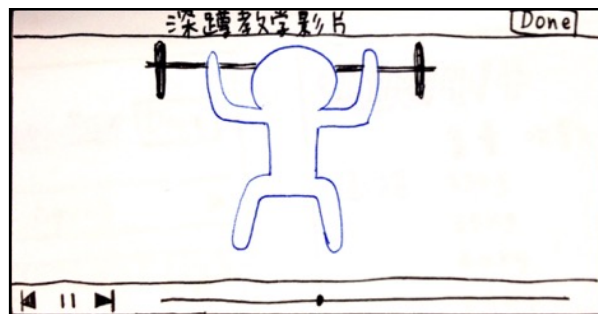
Mark Yang

Complex Task: Learn from the tutorial video and adjusting video

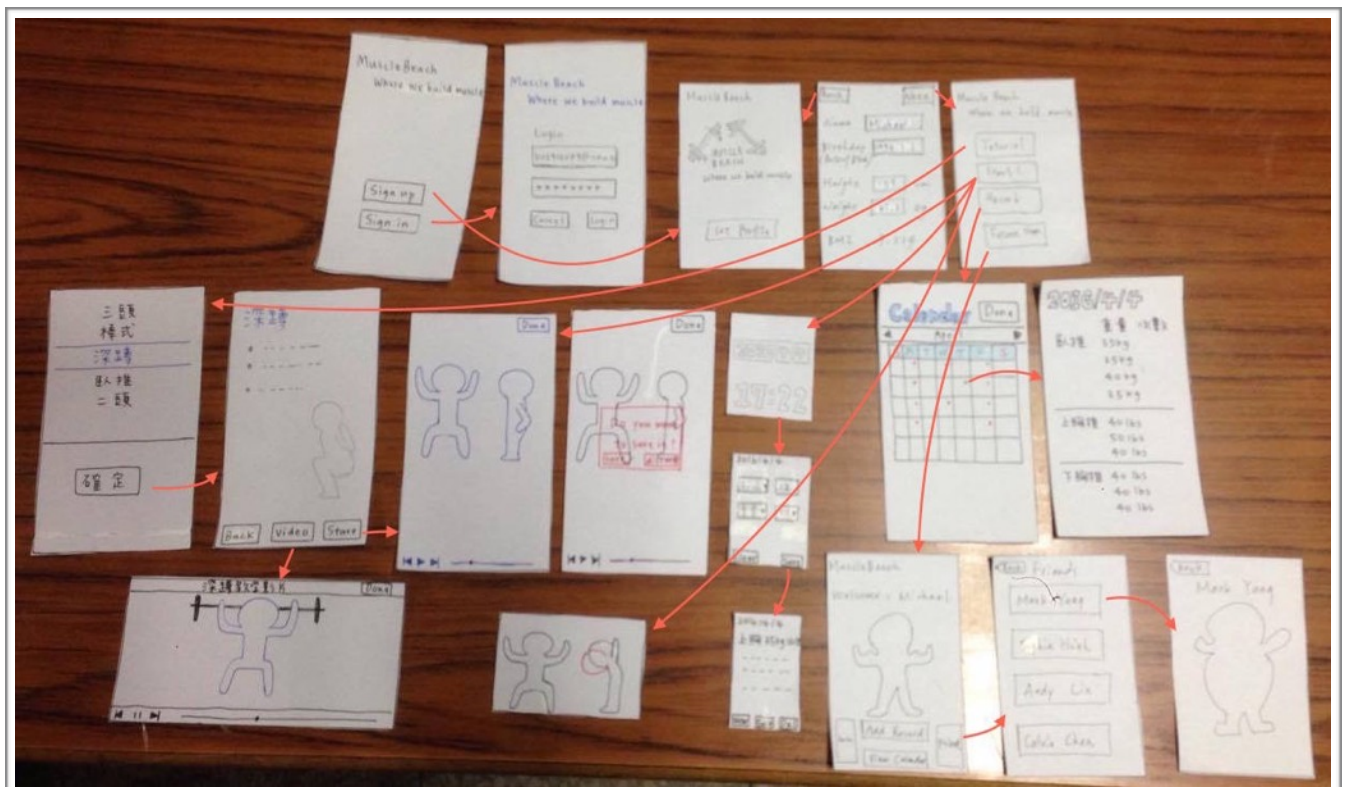
- Users can choose which workout he want to learn.
- Users can learn the correct postures via the tutorial video and real-time (smart glasses) correction video.
- This idea is using smartphones' camera to build a vision-based motion recognition model, which then compared to experts' motion (marked as red one).



smart



Entire System:



Method

1. Participants: 社企流員工、運動員、研究生。
2. Prototype: Paper prototype.
3. Task: Record the training, Set the goal shape and share with friends, Learn from the tutorial video and adjusting video.
4. Procedure: Show the three tasks once and let the participant try any task.

Results

社企流員工

1. 要多帶眼鏡太麻煩。
2. 手錶表達不清楚。
3. Tutorial 裡面不要有 Start 的選項。
4. **Start** 進去之後要有選單選擇接下來要做什麼動作。
5. 可以更新**profile**，記錄體重**BMI**的變化。
6. (optional)用一些數據、曲線去分析和顯示使用者重訓的進步。
7. **Future Shape** 改成使用者重訓各個時間的照片，讓使用者可以透過照片看到自己的成長，增加繼續進步的動力。

台大盃男排全明星賽攔中

1. 手錶的功能可以取消，直接用手機作記錄。
2. 眼鏡的功能應該不錯。
3. **Record** 可以記錄體重。
4. Friends 可以設定是否公開自己的紀錄。
5. 要有真的預測效果，比如說根據你做的部位，去改變不同部位的狀態，小人可以跟你有互動，更豐富真實。

機器人研究生

1. 可以在朋友的小人上面留言或是貼圖，增加與朋友的互動，互相鼓勵督促。
2. 小人很可愛，但不一定對持之以恆有幫助。
3. 手錶是不必要的。
4. 技術上的難關可能沒辦法突破。

Discussion

1. Glasses can be optional since some people don't wear glasses, and it would be annoying if you need to bring another gear.
2. Watch is kind of annoying, and the features can be done by the smartphone.
3. The little man should be improved. For example, the interaction between users and their little men or between the users and their friends' little men.
4. Record the users' weight and BMI, it could be a very good and intuitive clue for the users' workout achievement.
5. Besides, app can also record users' photos during the workout and construct a photo sequences that show the users' improvement.