

DASH



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**How many of you
have ever engaged in
distracting behaviors
while driving?**



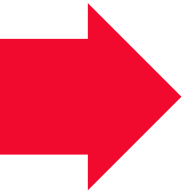
Problem

Distracted driving as a result of:

Texting,
Calling,
Scenery,
Makeup,
Drinking,
Exhaustion...



94% of crashes are driver-related



Leading cause = *recognition error*



Recognition error = error due to driver inattention and internal/external distractions

How bad can it be?

Each day in the United States, over **1,161** people are injured and over **8** people are killed in crashes that are reported to involve a distracted driver.

**How can we encourage safer
driving habits?**

Design Research: Methods

Interviews

Fly-on-the-wall observation



Design Research: Participants

Professional: drive instructor, bus driver

Casual: experienced driver, inexperienced driver



Design Research: Takeaways

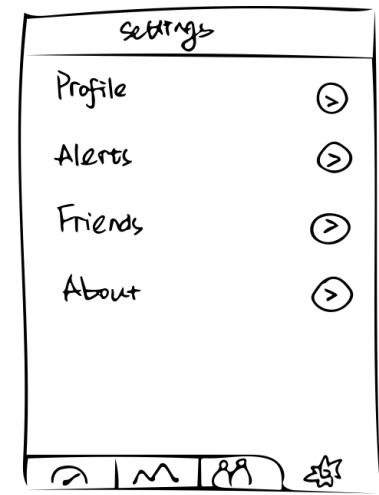
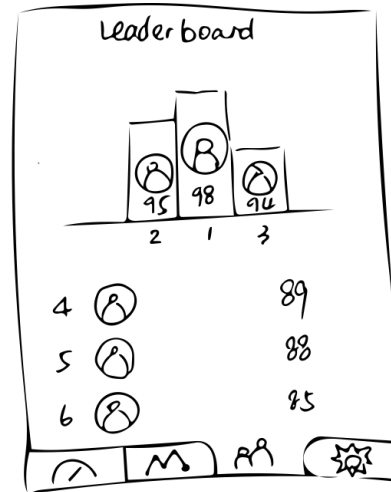
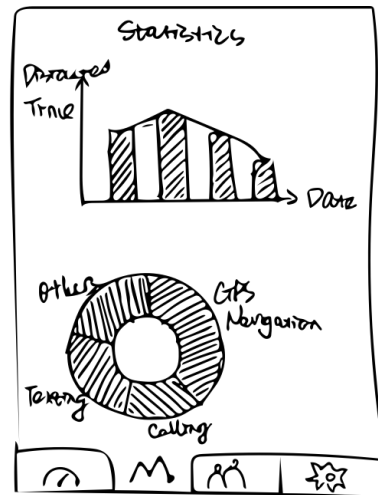
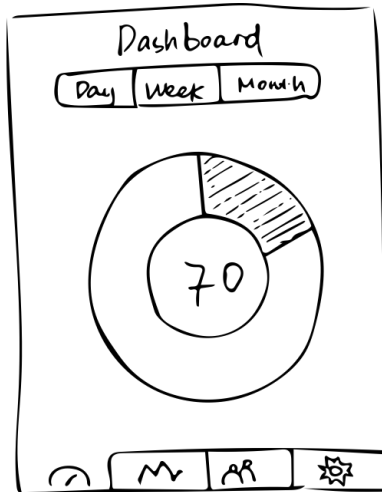
- ▷ Mobile devices are major distractions
- ▷ Passengers encourage safer driving
- ▷ Drivers are not aware of how much time they are distracted
- ▷ Audio and voice controls are not highly distracting
- ▷ Users are concerned about privacy

Tasks

1. **Learning** consequences of distracted driving
2. **Receiving** alerts of distracting behavior while driving
3. **Sharing** and **comparing** safe driving habits
4. **Tracking** eye and body movements of driver in real-time
5. **Processing** and **visualizing** data on driving behavior
6. **Monitoring** driving behaviors in employees/children

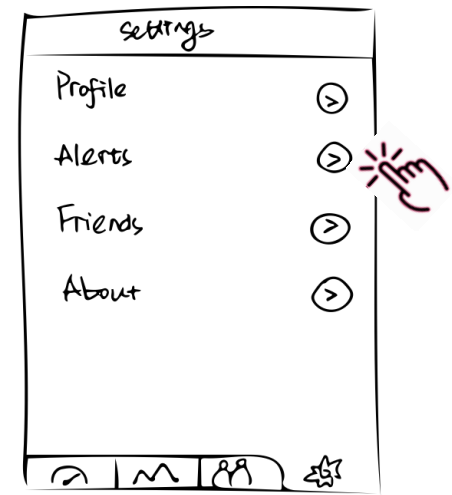
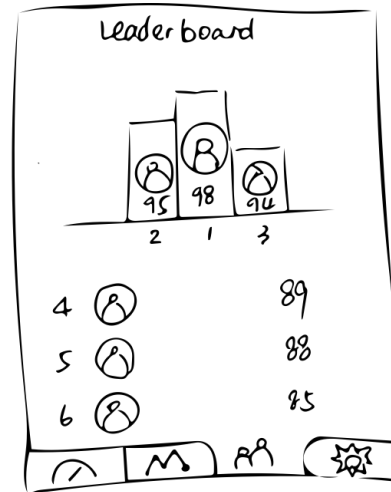
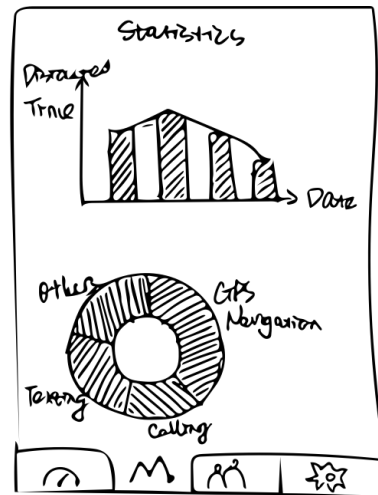
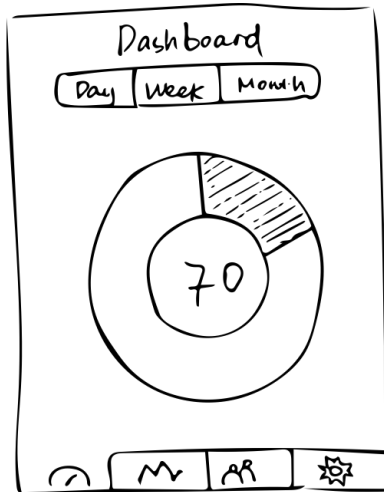
Design 1

STAND-ALONE MOBILE APP



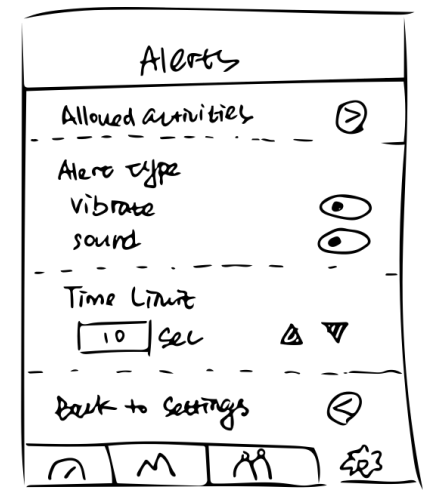
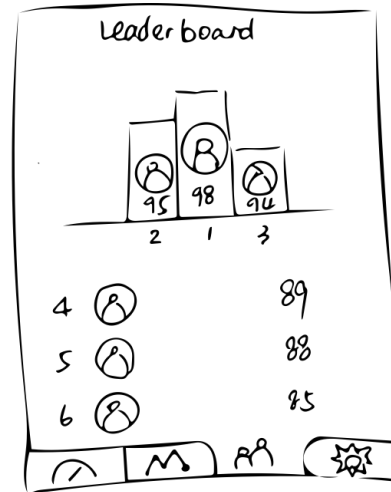
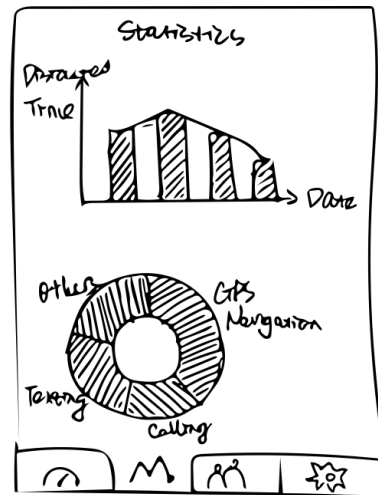
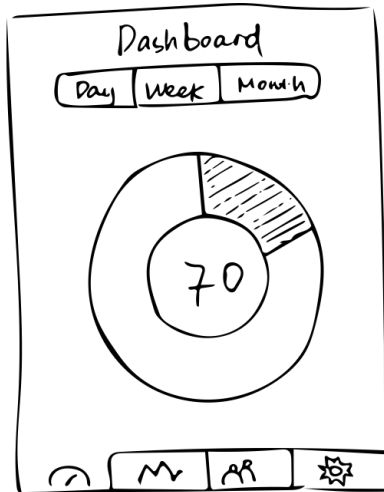
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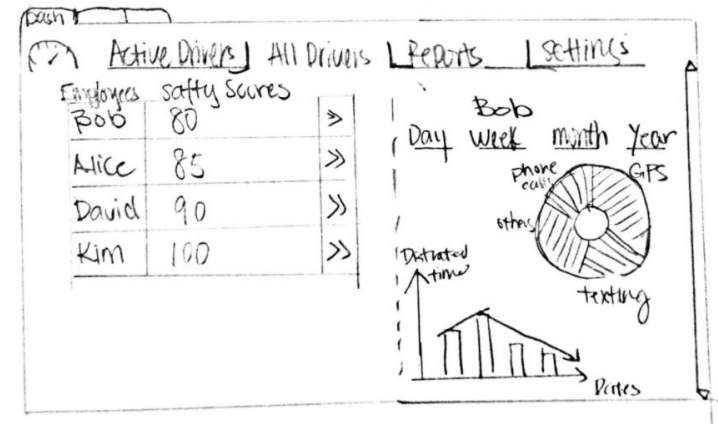
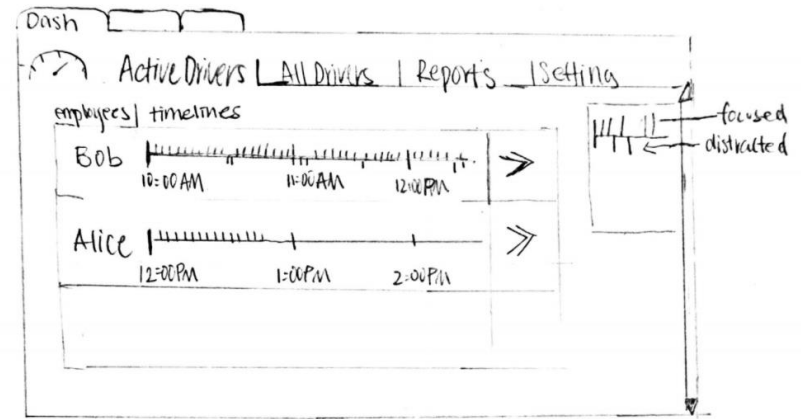
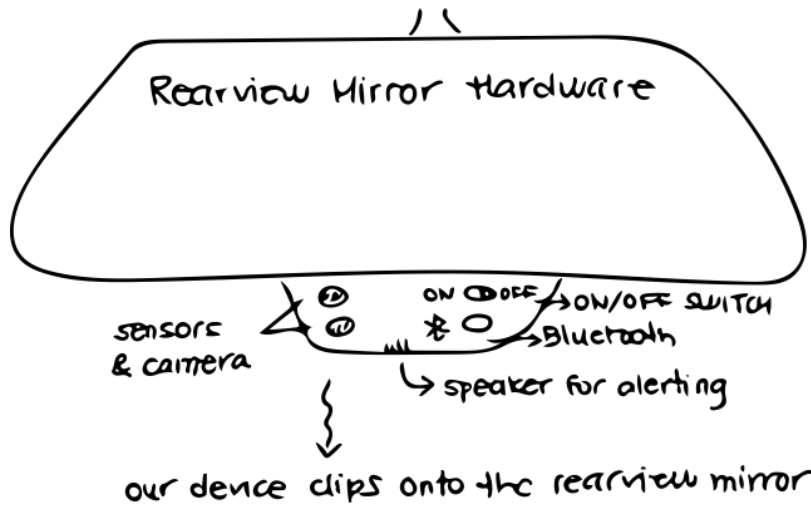
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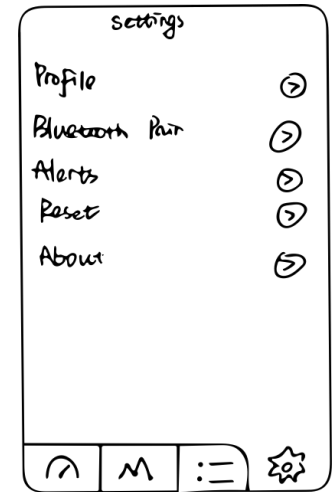
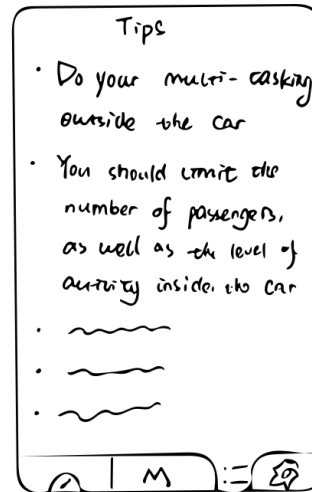
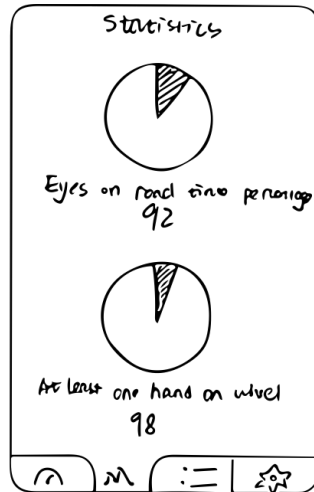
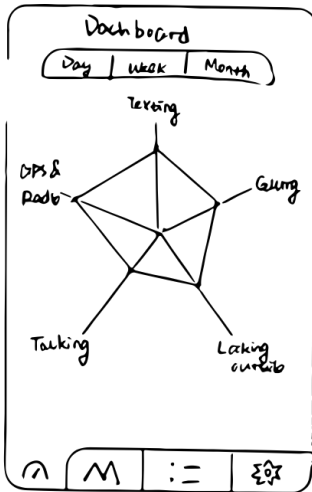
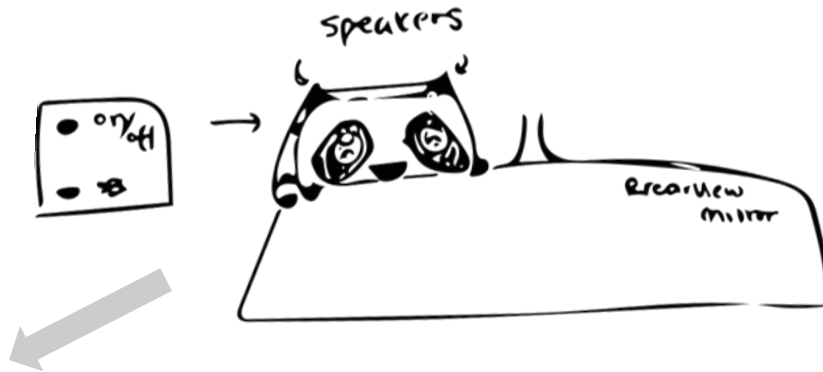
Design 2

MONITORING HARDWARE & WEBAPP



Design 3

TRACKING HARDWARE & MOBILE APP



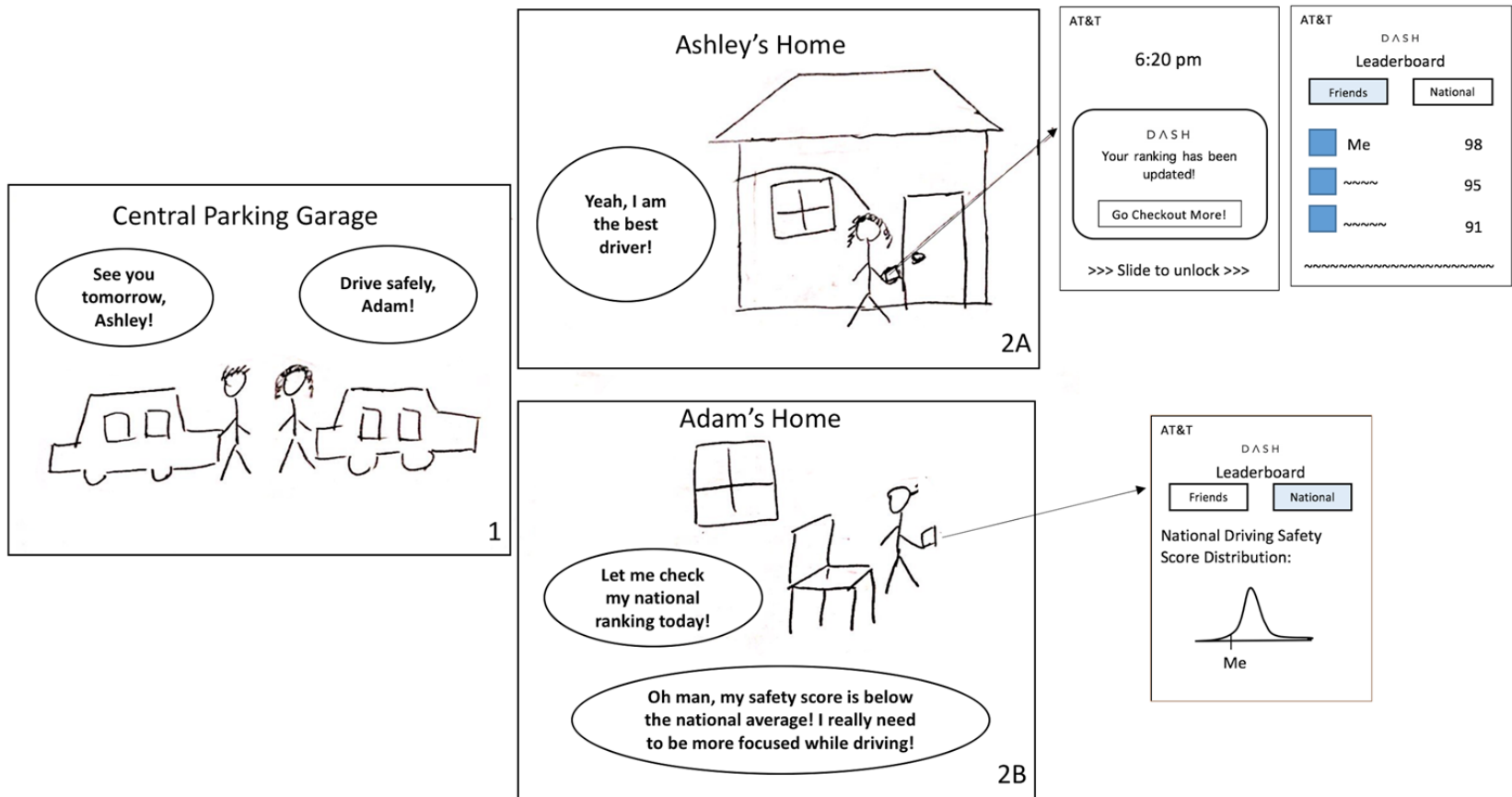
Storyboard 1

PROCESSING & VISUALIZING DATA ABOUT DRIVING



Storyboard 2

COMPARING & SHARING DRIVING HABITS



Summary

- Flexibility and communication is key for teamwork
- Research before designing
- Iterate through many sketches--evaluate them all!
- Don't sweat the small details about implementation

DASH



Questions?