Application development process

Part 2

Interaction Design Principles

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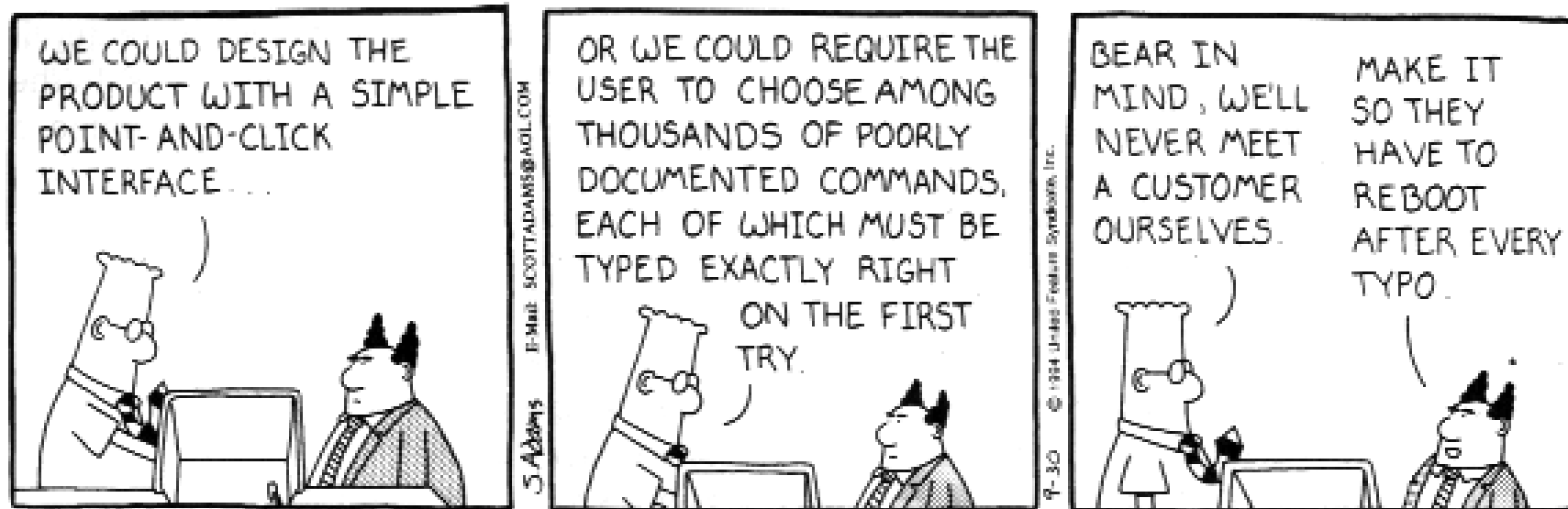
Overview

- Good/Bad UI Design

- Interaction Design Principles

- Screen layouts

- Navigation Patterns

- Screen Flows

- Prototyping

Preview of UI Analysis/Design Process

- **UI Design**
  - **Inputs**: Use Cases
  - **Activities**: Validate Technical Feasibility, Customer Validation, User Validation
  - **Deliverables**: Proof of Concept Wire Frames, Storyboards, Prototypes
- **Document**
  - **Inputs**: Data Requirements, Business Rules, Use Case
  - **Activities**: Write UI Specifications, Conduct Review Meetings
  - **Deliverables**: UI Specification (Navigation Flow, Screen Captures, Controls w/ Behaviors, Error Messages), Detailed Usability Test Plans
- **Refinement**
  - **Inputs**: UI Specification, Prior Research, Code
  - **Activities**: Formal Usability Testing
  - **Deliverables**: Test Results Report
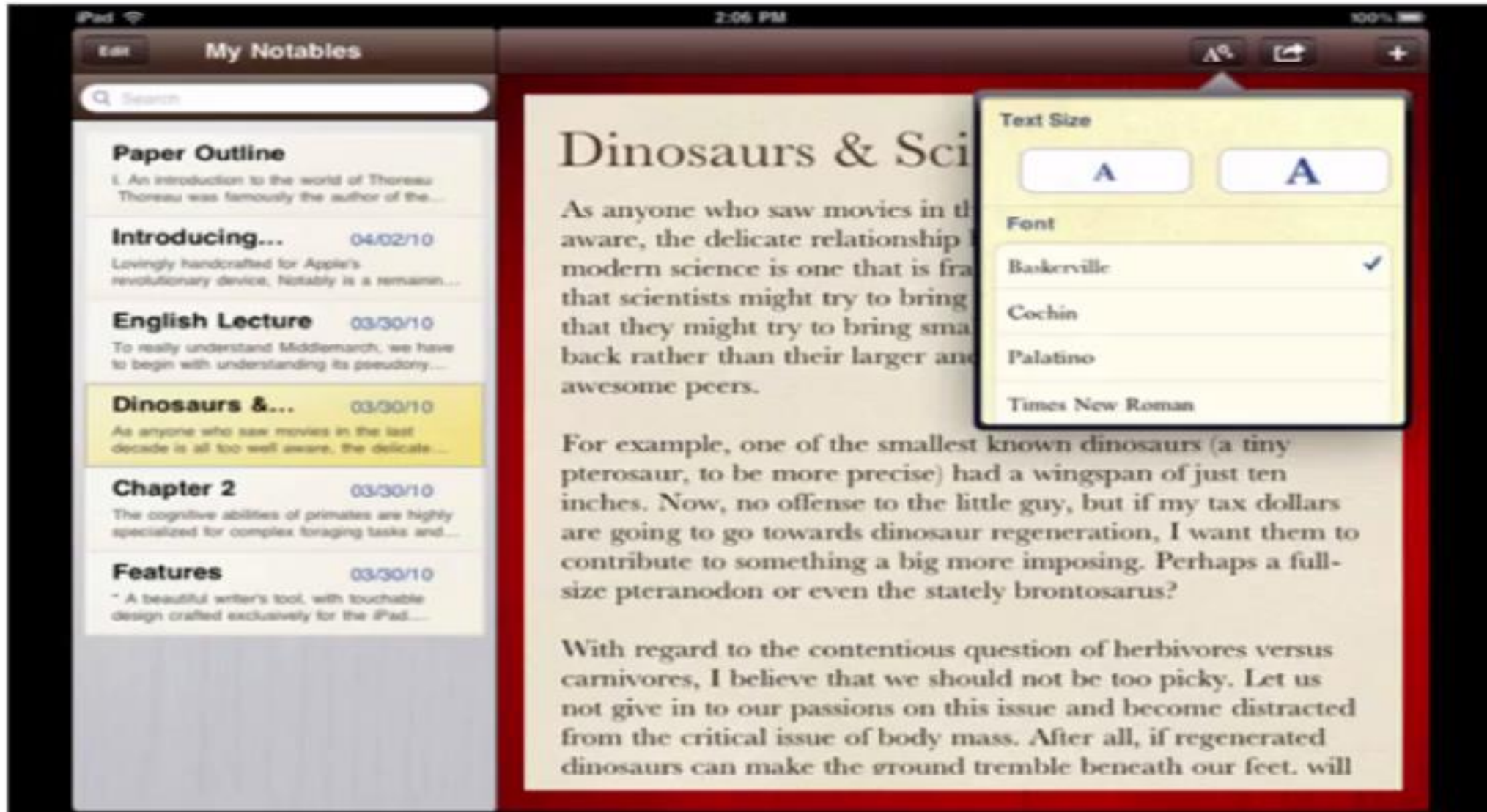
Bad UI Design

Bad UI Design
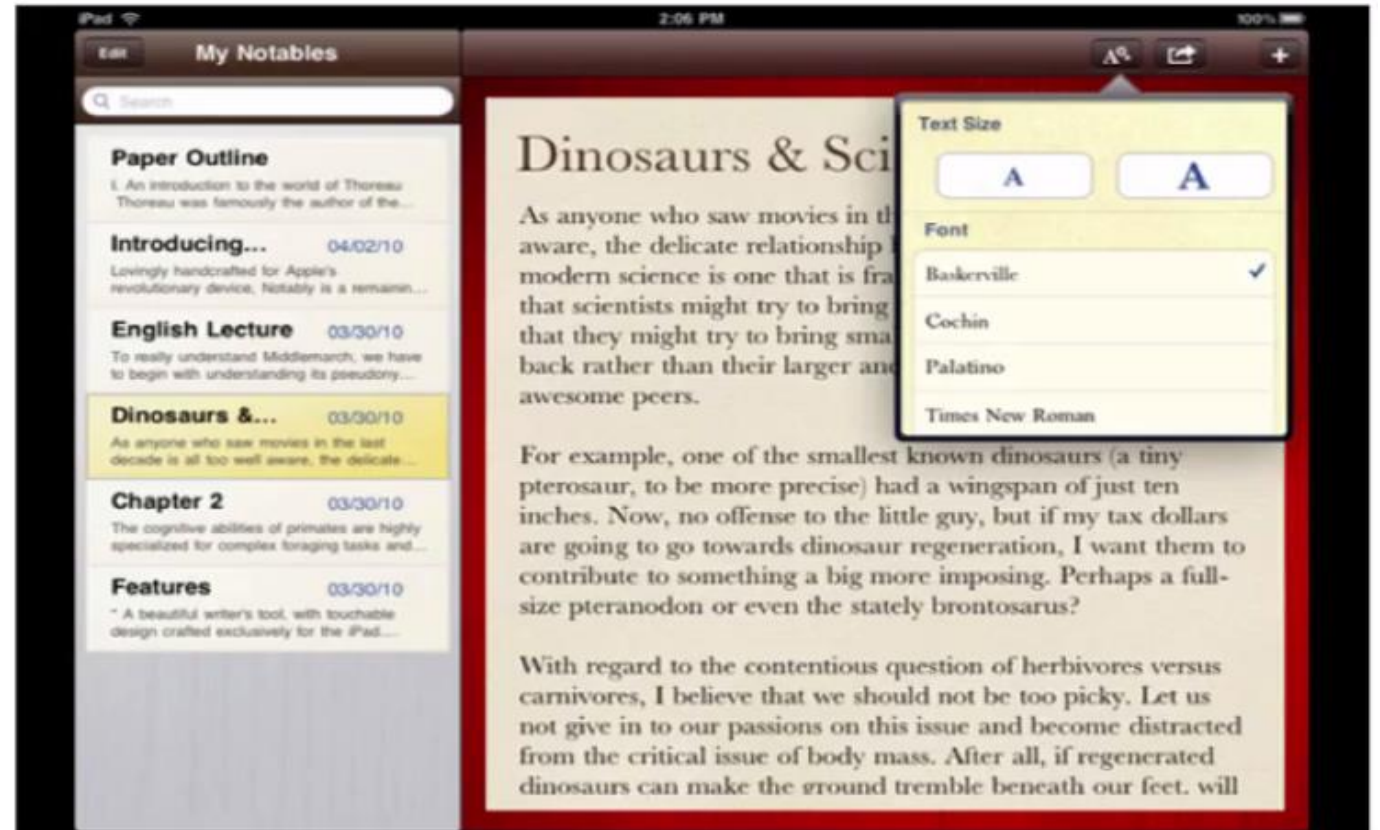
Good UI Design

Good UI Design

Good UI Design

- Good UI Design:

  - Aesthetically pleasing

  - Familiar

  - Logical

  - Functional

  - Efficient

Interaction Design Principles

- Learnability

- Efficiency

- Memorability

- Error Recovery

- Simplicity

- Mapping

- Visibility

- Feedback

- Consistency

- Satisfaction

Learnability

- An interface should be easy to use from the first time a user interacts with it.

- Amount of functionality presented to the user should be limited to exactly what the user requires to get the goal done.

Efficiency

- Number of steps it takes for a user to complete a task.

- Key tasks should be made as efficient as possible.

Efficiency

Memorability

- Interface should be easier to use each time the user interacts with it.

- Frequency of use is the key factor in memorability.

Error Recovery

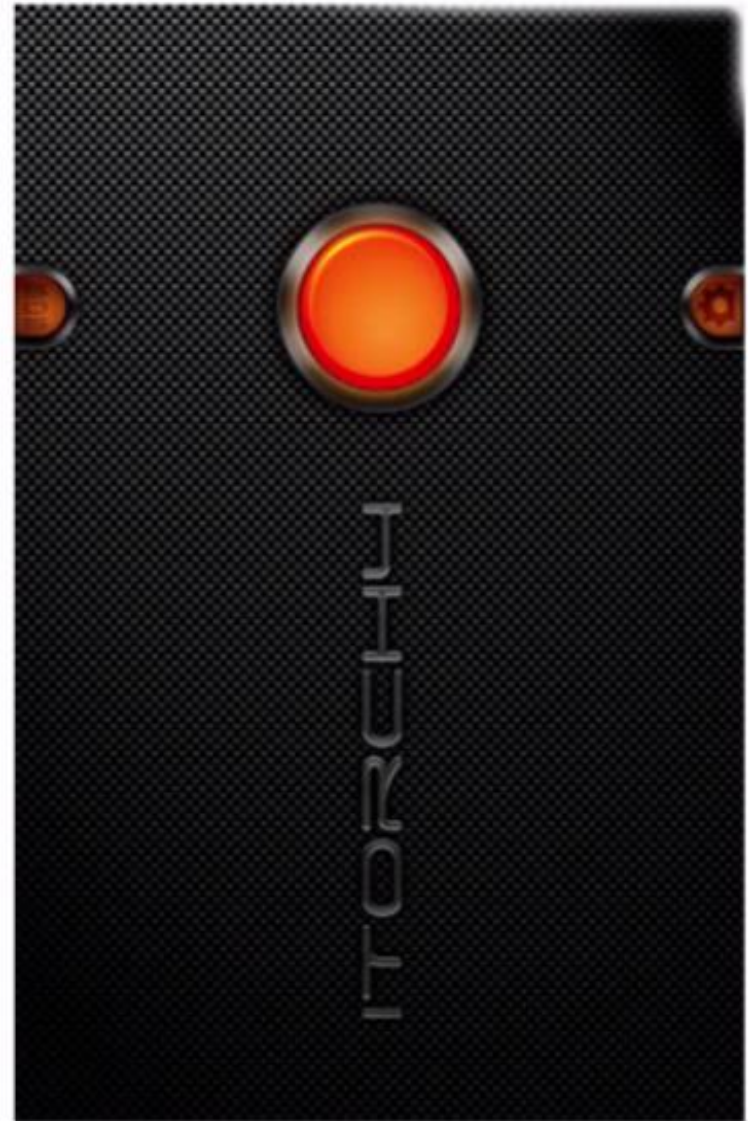- In perfect user interface, user should never be allowed to make a mistake.

Simplicity

- Usual tasks should be easy and less common tasks should be possible.

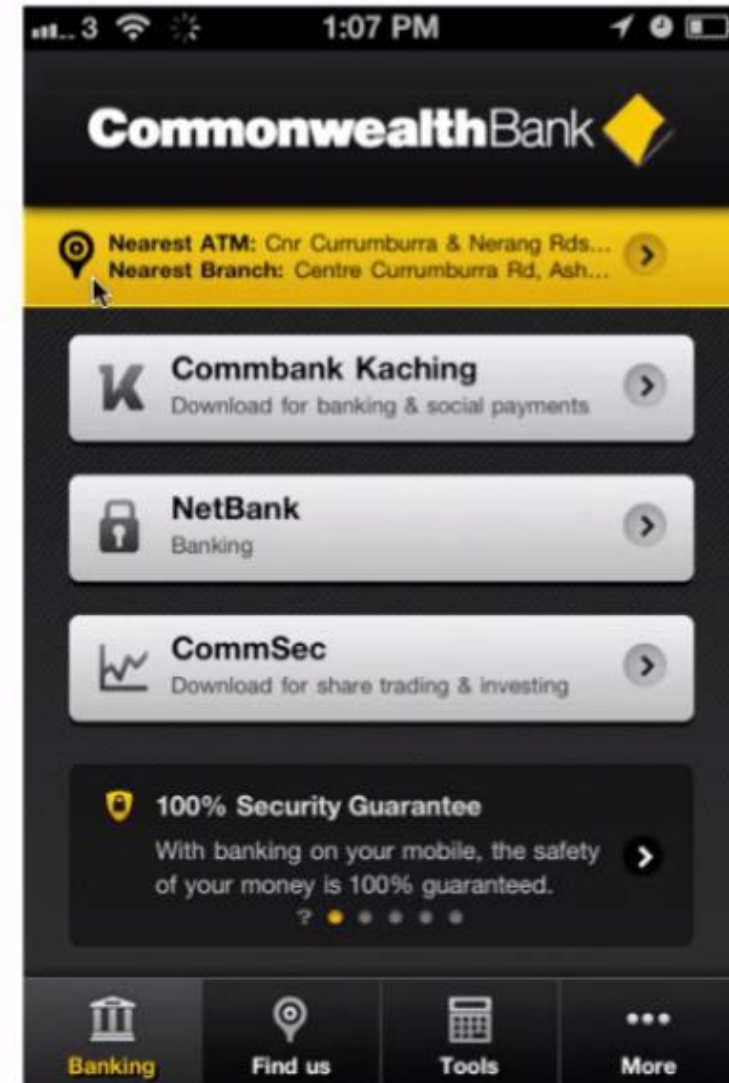- Avoid unnecessary functionality and keep the visual design and layout uncluttered.

Mapping

- What the user expects to happen when they interact with the user interface is exactly what should happen.
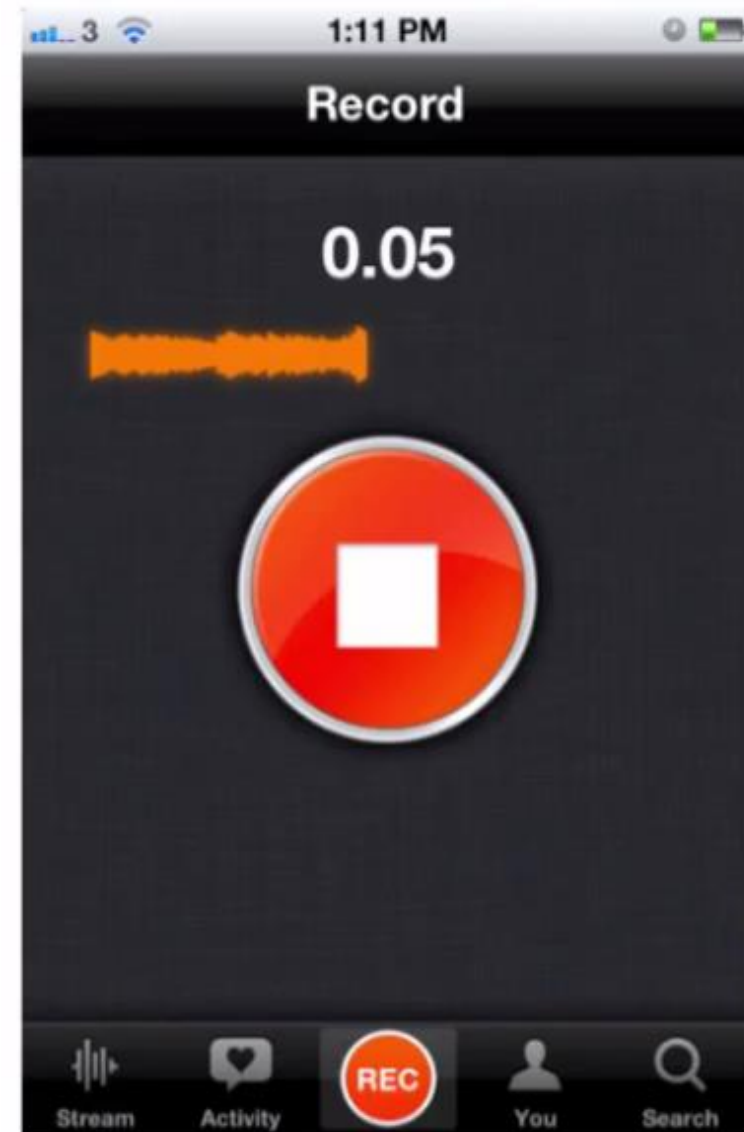
Visibility

- Important information should be the most visible.

- Less important information should be less visible.

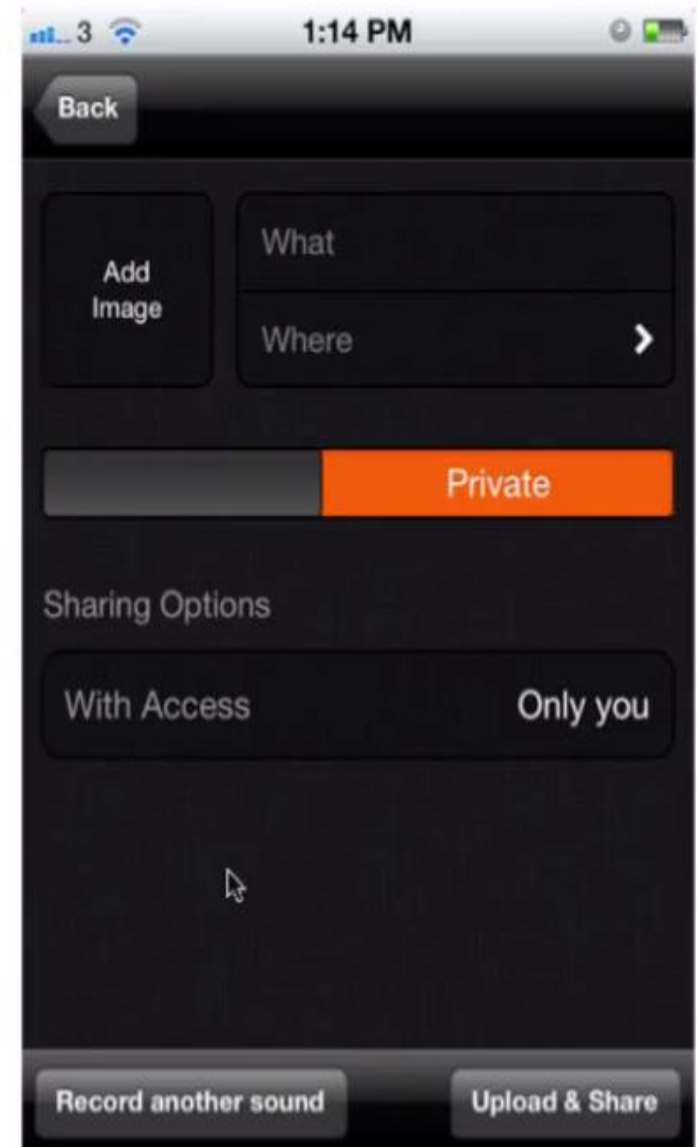- Understanding the users' goals is critical.

Feedback

- User should always be in control of the user interface and not the other way around.

Consistency

- Like-items should always be displayed and act the same way across the entire application (and even between applications).

- UI standards.

Satisfaction

- How much the user enjoys or dislikes the software.