Improving the iOS Alarm App: Heuristic Evaluation & Usability Testing

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Product Evaluated: iOS Alarm Clock App

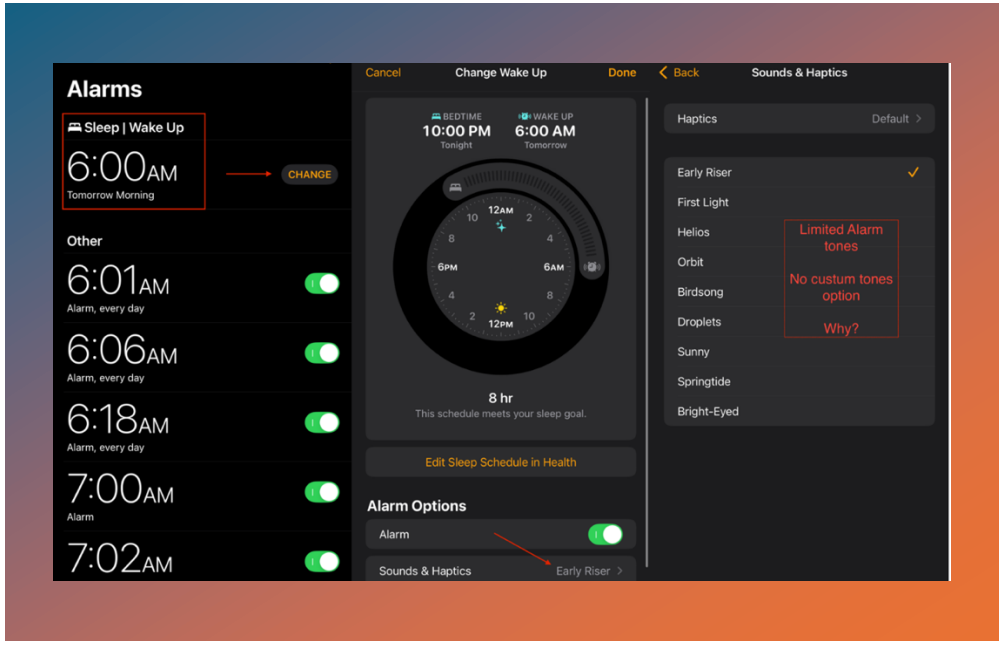
Goal: Identify usability flaws & propose improvements for this essential daily tool.

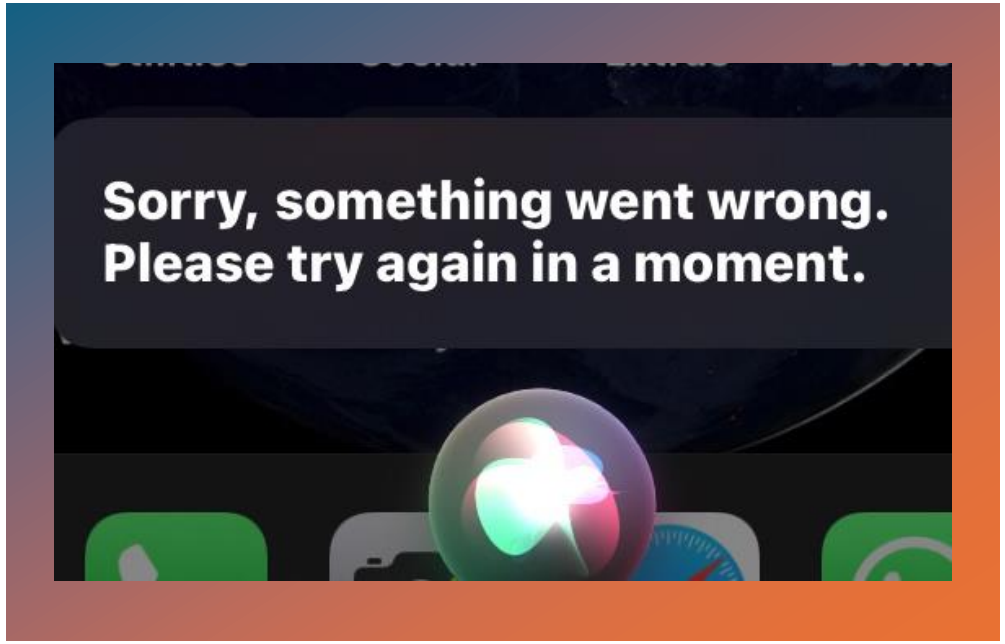
Project Goals & Methods

- **Goals:**
  - Identify usability flaws (vs. Heuristics)
  - Observe real user task completion (Usability Testing)
  - Recommend design improvements
- **Methods:**
  - Heuristic Evaluation (2 Experts, 6 Heuristics: 3 Nielsen + 3 Custom)
  - Usability Testing (2 Users, 2 Key Tasks, Think-Aloud)
- **Ethics:** Informed consent, voluntary participation.

Heuristic Evaluation Details

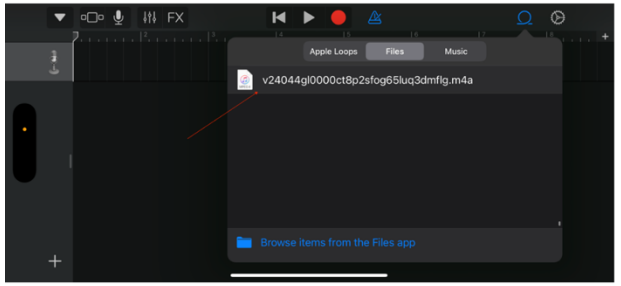
- **Experts:** CS Developer (Chris), HCI Master's Student (Kartik)
- **Nielsen Heuristics Used:**
  - Visibility of System Status (Feedback?)
  - User Control & Freedom (Easy to undo/exit?)
  - Error Prevention (Stop mistakes?)
- **Custom Heuristics Used:**
  - Ease of Customization (Simple custom tones?)
  - Accessibility Under Low Alertness (Easy when sleepy?)
  - Non-Disruptive Background (Doesn't break other apps?)

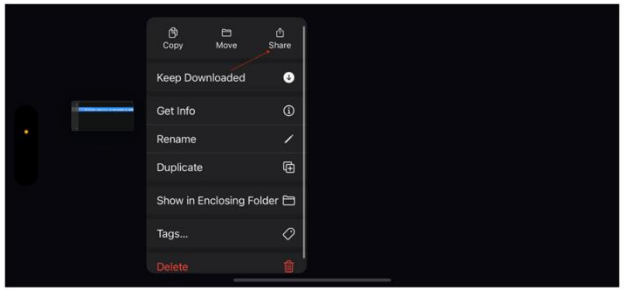


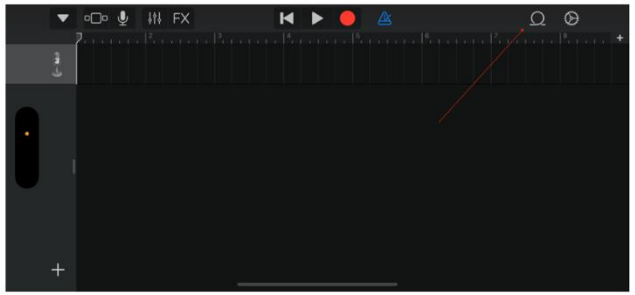


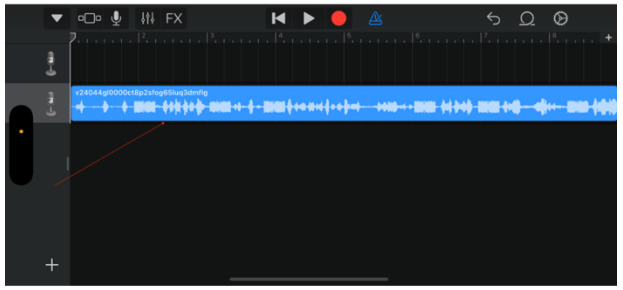
Heuristic Evaluation Results

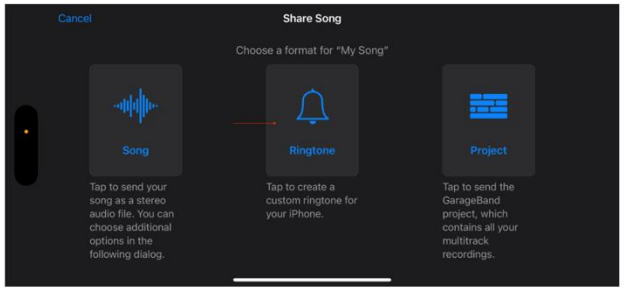
- **Major Issues Found:**
  - **Poor Feedback:** Alarm confirmation & Siri errors (Violates: *System Status, Error Prevention*)
  - **Complex Custom Tones:** Non-discoverable, requires external apps (Violates: *Ease of Customization*)
  - **Low Alertness Issues:** Snooze/Stop buttons potentially confusing (Violates: *Low Alertness Clarity, User Control*)
  - **Siri Unreliable:** Silently fails on tone requests (Violates: *System Status, Error Prevention*)

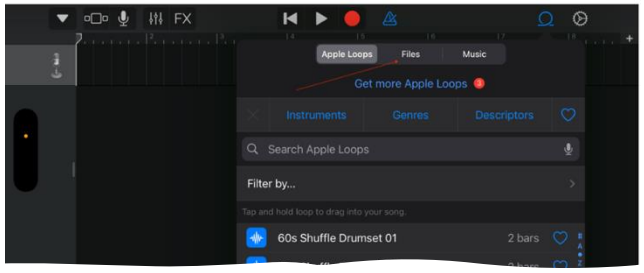


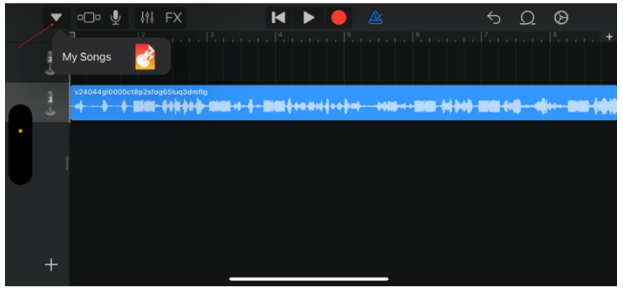


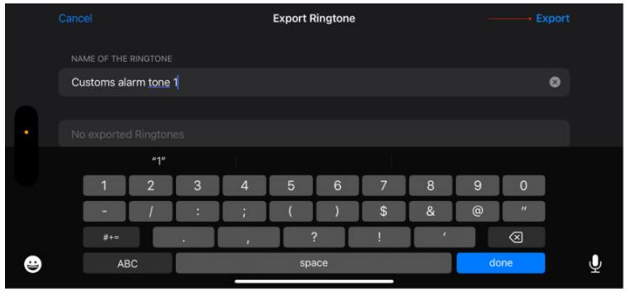










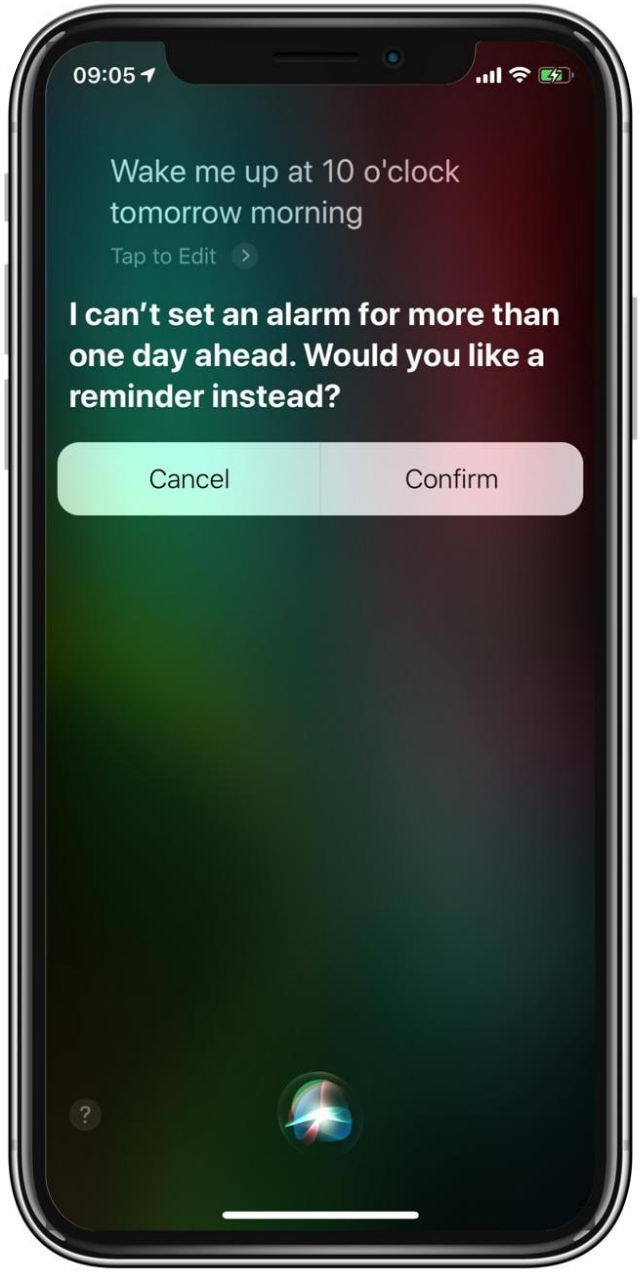


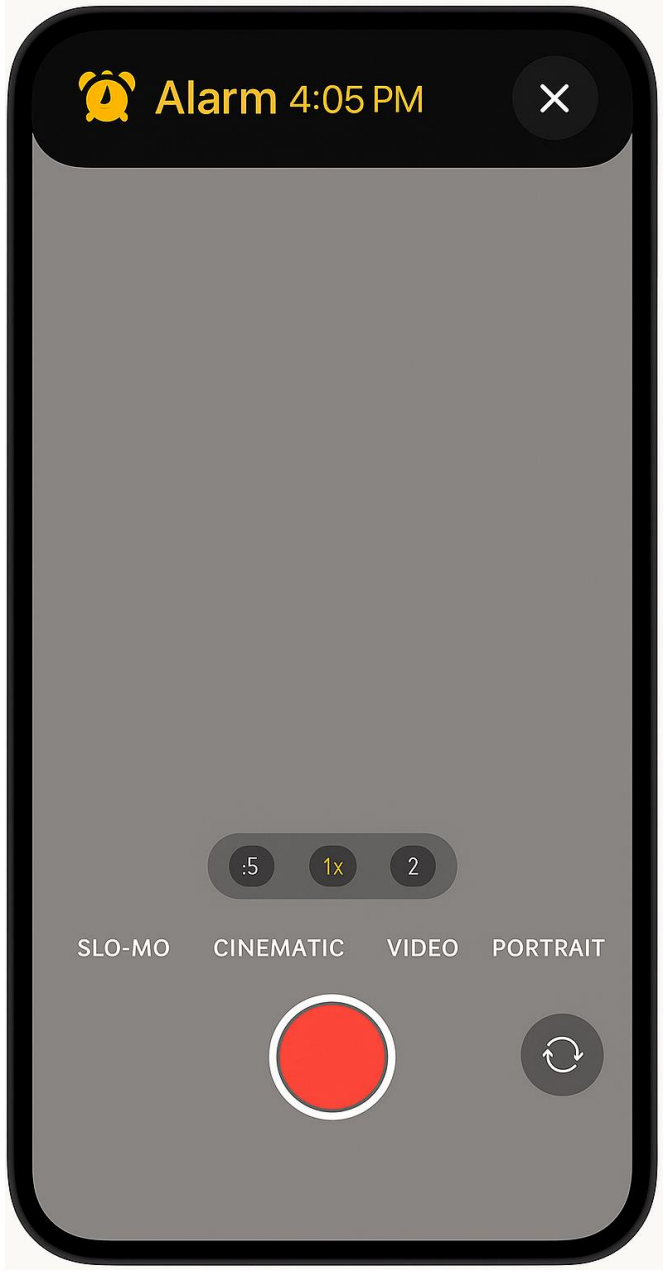
Usability Testing: Setup

- **Participants:** 2 Users (**Emma**: Student/Frequent User; David: Avid User)
- **Method:** Think-Aloud Protocol, Observer Notes
- **Key Tasks Tested:**
  1. Set an alarm with a *custom* sound file (non-default).
  2. Set an alarm using Siri (specifying tone) & *verify* in app.

Usability Testing: Key Findings

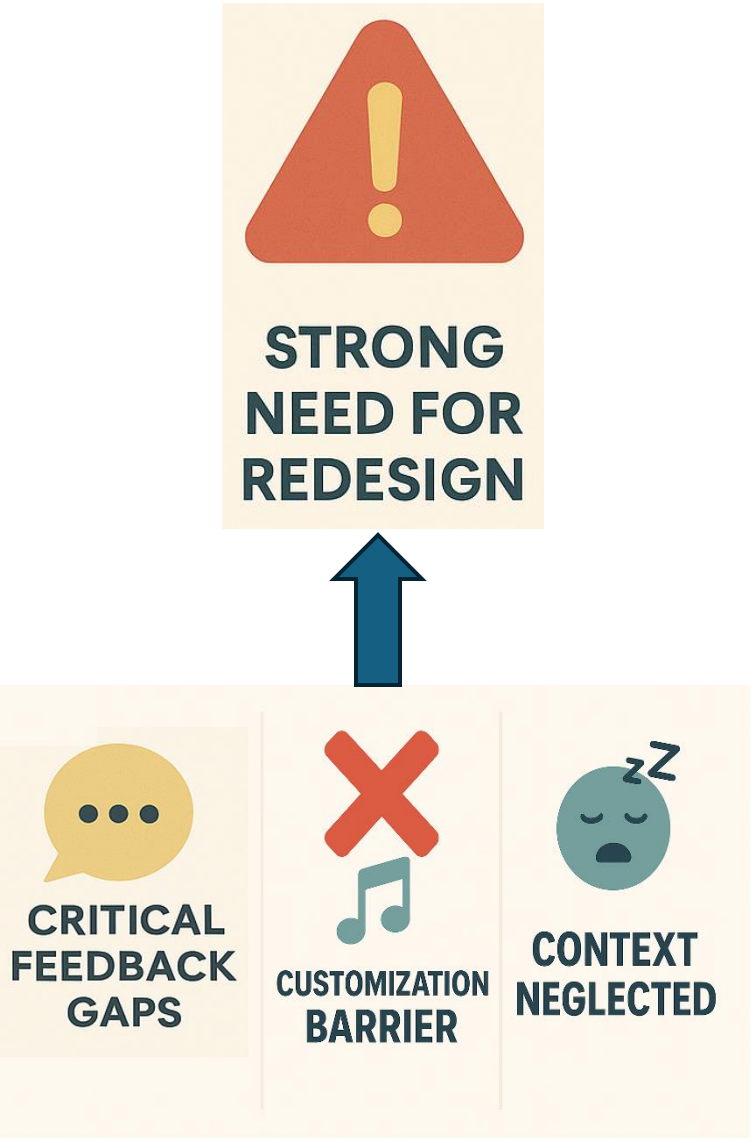
- **Task 1 (Custom Tone): COMPLETE FAILURE.** Both users unable to find how; required external apps. Caus frustration/confusion.
- **Task 2 (Siri + Verify): PARTIAL FAILURE.** Siri set tir but *failed* on tone (used default). Users noticed error o *upon manual check*.
- **Observed Pain Points:** Validated HE findings - customization complexity and silent Siri errors are real blockers.





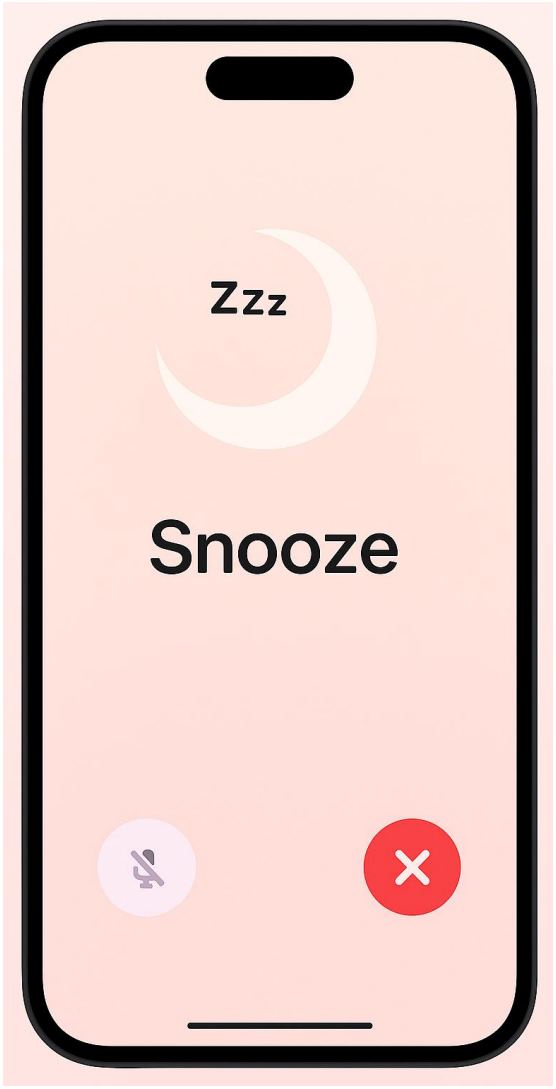
Summary: Core Problems Identified

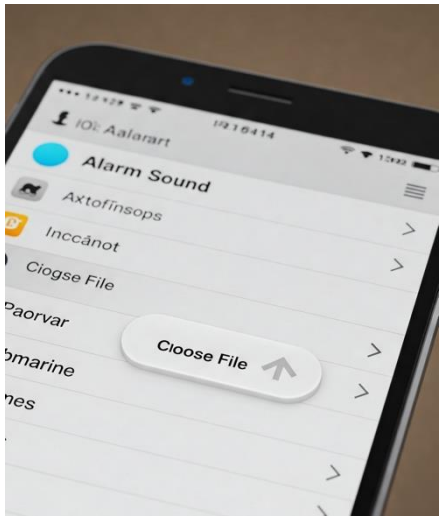
- **Customization Barrier:** Setting custom tones is unintuitive & overly complex.
- **Critical Feedback Gaps:** Lack of confirmation for set alarms & silent Siri errors.
- **Context Neglected:** Interface (e.g., ringing screen) not optimized for low alertness.
- **Unreliable Automation:** Siri interaction for detailed settings is untrustworthy.
- **Strong Need for Redesign:** Both methods highlight significant room for improvement.



Recommendations for Improvement

- **Simplify Custom Tones:** Add direct "Import/Choose File" button in Sound menu.
- **Fix Siri:** Require explicit tone confirmation & clear error reporting.
- **Enhance Feedback:** Add post-save confirmation; make status indicators clearer.
- **Redesign Ringing Screen:** Larger, distinct Snooze/Stop buttons, high contrast.
- **Add Control:** Allow customizable snooze duration.





Thank You!