Heuristic Evaluation of Intent

1. Problem/Prototype Description

Intent is an Imessage extension with an accompanying iPhone application that helps people be more productive at achieving daily goals by helping people share their goals with a group. They also help create a forum where others in the group can share their own goals and comment on each other's goals and their progress.

2. Violations Found

Task 1:Engage with a friend's shared intentions

1. H3. User Control and Freedom / Severity 2 / Found by: A, B
- Problem: Responding to list item or entire list
    - Rationale: In the response screen where you can like, heart, or comment on someone else's tasks, there's no clear way to indicate whether you want to comment on the **entire intentions list or just one item** in the intentions list. But the next screen of the med fi then specifies you are only responding to one item on the intentions list by saying "Response to 'Apply to Microsoft Internship':". The user lacks the ability to specify what they're responding to and they might want to respond to their entire task list, not one item on the list.
    - Rec: No need to specify which tasks people are responding to instead just indicate whose list people are responding to and people can comment on, heart/like the **entire** list

2. H4. Consistency and standards / Severity 2 / Found by: A, B, C
- Problem: Back button doesn't look like a button and gets lost on screen.
    - Rationale: There is a back button on the response screen but it isn't highlighted and there's no visual indication that it's a button. The font of the button makes the back button fade into the background and get lost with the other header text.
    - Rec: Differentiate the back button from the header text and style it consistently with how you styled other buttons such as "send" or "update".

3. H7. Flexibility and efficiency of use / Severity 1 / Found by: A, B
- Problem: Quicker and Separate Access to Reactions
    - Rationale: If people only want to give a reaction then they don't need to enter a screen with a text box and do extra steps because odds are if they're giving a reaction they're not going to want to comment as well.
    - Recommendation: Make reaction to someone's intentions easily accessible without having to enter another screen with a text box. Model it how reactions are currently modeled on iMessage where you press and hold on a message to select a reaction. Or if

you want to keep the reaction with the text box make the reaction a part of the text portion of the response message.

4. H7. Flexibility and efficiency of use / Severity 2 / Found by: C (added afterwards)
- Problem: Have to interact with the original text
  - Rationale: The way the prototype is currently set up, a user has to click on the original message in order to interact with it. This is not efficient if the group chat where a user is sharing intentions is also active with other texts or messages; this would mean that a user would have to scroll back potentially back hundreds of messages to find an intent message to interact with.
  - Recommendation: Interact with the intent messages from the group screen within the intent app.

5. H11. Accessible / Severity 1 / Found by: C (added afterwards)
- Problem: Label/filler text is difficult to read
  - Rationale: Some text is a little hard to read and may be difficult for visually impaired users, for example, the "respond to…" label on the interaction screen is a pretty light color and slightly too small.
  - Recommendation: use darker/thicker text to increase readability and contrast.

Task 2: Sharing intentions with multiple groups

4. H1: Visibility of System Status / Severity 3 / Found by: A, B
- Problem: Single Source of Truth Intentions List
  - The current app screenshot has a list of tasks but it's unclear if this is a master list of all tasks or an arbitrary list. Additionally, the imessage extension doesn't seem to save the intentions across multiple group chats and doesn't display a master list of intentions. As a user, I may want to send the same tasks to multiple groups or keep track of all my tasks across all my groups in one place.
  - Rec: have a single board within their separate app that has all tasks, similar to the app that accompanies the Game Pigeon extension. The tasks are updated in real-time and there's a single source of truth to what's being marked as "done" and what's not. Additionally, you could add a feature when users first click the imessage extension in a new group chat they have two options: "create new list" or "start from existing list". "Start from existing list "redirects users to the app where they can see their master list of tasks and determine which ones to send to the group.

5. H6. Recognition rather than recall / Severity 1 / Found by: A, B
- Problem: In the app, Users Forced to Remember Which Groups They Shared Tasks With
  - Rationale: Based on the screenshots in the slides, if I wanted to share a task with a group, I have no way of seeing which groups I've already shared that task with. This

could lead me to share the same task with the same group multiple times and forces the user to remember which tasks they've shared to which groups.
- ○ Rec: Color code or group tasks (ie Unshared, Shared with 2 groups, shared with 1, etc). Then if users want to share a task in the "2 group section" with another group they could click the task see a new screen describing who the task is already shared with before then sharing it with a new group.

Task 3: Share your intentions within a group, add new intentions, and update the group about your progress and reflections along the way

6. H3: User Control & Freedom / Severity 4/ Found by: A, B, C
- **Problem:** "Send" and "Cancel" Buttons don't provide sufficient user control
  - ○ Rationale: Once you click the plus button you can add intentions with your voice or by typing. It's confusing when adding an intention via text there are "cancel" and "send" buttons at the bottom of the screen and the next screen also has "cancel" "send". When adding intention users often want to be able to go back and save changes rather than send the list of what they have to everyone in the group at that moment. Therefore these buttons don't provide enough functionality.
  - ○ Rec: Change "cancel" to a back button and change send to save "changes button". Also, add a back button throughout other flows where appropriate.
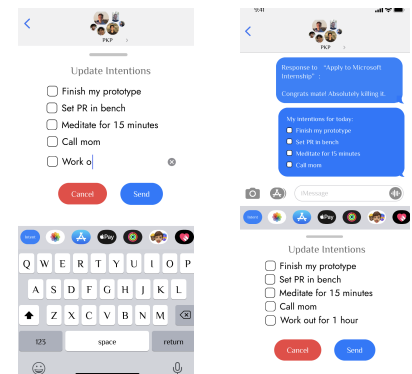
7. H3: User Control & Freedom / Severity 3/ Found by: A, B, C
- **Problem Description:** User cannot delete intention
  - ○ Rationale: Currently when you press the plus and choose via "text" option it seems like you might be able to delete the text for a certain intention but it's unclear whether this is possible. There is no indication you can delete tasks when you press the plus and select via voice
  - ○ Rec: Get rid of the plus button and make an edit button on the home screen that takes you to a screen where you can add and delete intentions

8. H4: Consistency & Standards / Severity 2/ Found by: B
- **Problem:** Reflection Microphone Icon Same as Edit Microphone Icon
  - ○ Rationale: After checking off an item on the intentions list a microphone icon appears next to the list item. This microphone looks the same as the microphone that lets you transcribe edits to the intentions list. It is **very confusing seeing it appear next to a task that has been checked off.** This microphone is supposed to let users reflect on a task they've completed but this is not clear and the icon is used previously to represent something else so using it again to represent "reflection" is perplexing.

- ○ Rec: keep the microphone icon for transibing edits to the intentions list and use a different icon to indicate the user can reflect on a completed task.

9. H4: Consistency & Standards / Severity 2/ Found by: A, B, C
- ● Problem: Inconsistent Text and Voice Icons
    - ○ Rationale: At the beginning, it asks for a pencil and mic to symbolize text and speech. Later, when updating your view, it switches to a pop-up modal where a user has to select. This is explicitly inconsistent and confusing for the user .
    - ○ Rec: Keep the icons for choosing audio transcription or text editing consistent when creating boards and updating boards.

10. H4: Consistency & Standards / Severity 2/ Found by: A
- ● Problem: Voice Transcription Icons Aren't Consistent.
    - ○ Rationale: You can use dictation to add intentions in the beginning and update your daily intentions list. The interfaces are different for these two screens. When adding intentions later, the voice graphic is next to an open check box which doesn't make much sense if this graphic is just there like a voice memo going up and down with the voice fluctuations and then printing all the text once you're done talking. The placement of the voice fluctuation icon is inconsistent and the purpose of it is unclear
    - ○ Rec: For transcription create a consistent flow. Something similar to how Siri is implemented in imessage. When you activate siri it starts circling right next to the cursor to indicate it's listening and **it types as you speak** so you can see what errors it makes and easily fix them
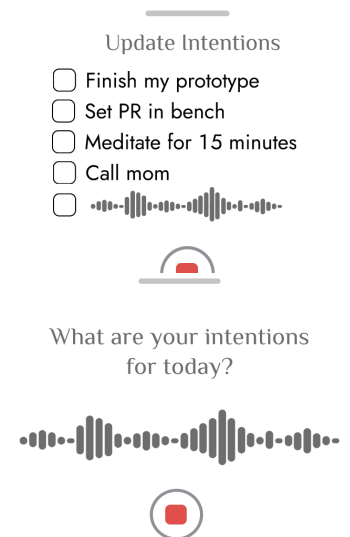
11. H7 Flexibility and Efficiency of Use / Severity 2/ Found by: A, B, C
- ● Problem: Separate Screen for Choosing Audio or Text Is Inefficient
    - ○ Rationale: When updating a task or adding a task each time you need to choose text/audio. Choosing to edit tasks via audio or text should be more efficient and clear process
    - ○ Rec: Similar to imessage interface default is text but by pressing and holding the send button lets you record a voice message. Enabling audio as an additional feature but having text as default is an option. Or give users the ability to choose voice/text editing as a default in the beginning.

12. H7 Flexibility and Efficiency of Use / Severity 2/ Found by: A, B
- ● Problem: Make Reflection Feature Less Prominent, Target it for Power Users
    - ○ Rationale: The reflection feature itself seems like an added bonus feature, but the way it's presented with that strage microphone icon appearing next to a completed task makes it seem like a core feature.

- ○ Rec: Change the "reflect" microphone icon to be a clearer icon that indicates reflection or rethink how to implement the reflection component in a more intuitive way. Additionally, make this feature more subtle and target it for power users.

13. **H8. Aesthetic and minimalist design / Severity 4/ Found by: A, B**
    - ● Problem: Ambiguous Update Button Is purposeless
        - ○ Rationale: When first clicking the extension icon and navigating through the extension window there is an "update" button present. On most screens the update button is below the addition sign. It's unclear what update does and users can't click the button in the prototype. The addition sign clearly indicates the ability to add more intentions to the list but I'm not sure if update saves edits or send updates to the group
        - ○ Recommendation: Make the update/save changes button separate from the "send" button. Do something like FB messenger where they have something that represents a user is "done" editing a message and something for the user to "send" a message.

14. **H9: Help Users with Errors / Severity 2/ Found by: A, C**
    - ● Problem: No way to correct transcription errors.
        - ○ Rationale: When adding text via dictation there isn't a screen that let's the user review what the phone transcribed and fix it if there are any errors.
        - ○ Rec: Add a screen that displays the transcribed message and lets users edit it before saving changes to intentions list.

15. **H11. Accessible/ Severity 2/ Found by: A**
    - ● Problem: Transcription isn't an option when responding/commenting
        - ○ Rationale: When responding to someone else's intentions, transcription isn't an option. However, since you allow users to use transcription in Task 3 it makes sense to be consistent and support accessibility by allowing transcription anywhere where users can enter text.
        - ○ Rec: Add transcription as a method of entering text while responding to others intentions

16. **H12: Fairness & Inclusion / Severity 2/ Found by: B**
    - ● Problem: Unsure how this extension would work for Android users, if at all.
        - ○ Rec: Perhaps it'd be interesting if Android users (because this is made on an iOS extension) had the chance to see the different effects in the group chat, as information is mostly exchanged via text messages, but unsure what it looks like as there's no precedent.

17. **H12: Fairness & Inclusion / Severity 4/ Found by: A, B**
    - ● Problem: Send button excludes users lacking unlimited data
        - ○ Rationale: Almost every screen has a send button. This implies every time a user adds something to their intention list or changes something they have to " send those changes" to the whole group to save the changes. Right now the send button seems to

be acting like a save button. This isn't inclusive or fair towards people who have limited phone plans and can't send unlimited texts. Having to send a text every time you want to save changes to your intentions list can make the app feel spammy and cause a financial strain on users who can't send unlimited messages
  - ○ Rec: Make the send button an option from the home screen when they are viewing their current intentions list. But otherwise create a save button. This allows users to update and change their intentions and have their own copy of their list. Then users can send an updated list to the group at their convenience.

18. H12. Fairness and inclusion / Severity 1 / Found by: C (added afterwards)
- ● Problem: users with speech impediments may never want to use speech
  - ○ Rationale: Users with speech impediments or impairments may never want to record their voice. The repeated prompting to use speech may be irritating.
  - ○ Recommendation: add an accessibility bar to turn off enabling speech analysis

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status				1		**1**
H2: Match Sys & World						
H3: User Control			1	1	1	**3**
H4: Consistency & Standards			4			**4**
H5: Error Prevention						
H6: Recognition not Recall		1				**1**
H7: Efficiency of Use		1	3			**4**
H8: Minimalist Design					1	**1**
H9: Help Users with Errors			1			**1**
H10: Help & Documentation						
H11: Accessible		1	1			**2**
H12: Fairness & Inclusion		1	1		1	**3**
H13: Value Alignment						
Total Violations by Severity						**20**

Note: **check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)**

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D	Evaluator E
Sev. 0	*0%*	0%			
Sev. 1	2/2= 100%	1/2 = 50%			
Sev. 2	8/10 = 80%	8/10 = 80%			
Sev. 3	2/2 = 50%	2/2 = 100%			
Sev. 4	3/3 = 100%	3/3 = 100%			
Total (sevs. 3 & 4)	5/5 = 100%	5/5 = 100%			
Total (all severity levels)	15/17 =88%	14/17 = 82%			

****Note that the bottom rows are *not* calculated by adding the numbers above it.**

5. Summary Recommendations

Throughout the heuristic evaluations the most critical thing we noticed is patterns of ambiguous elements and icons that could be changed or clarified to make the interface much more intuitive. Especially for the "update" "send" and "cancel" buttons throughout task 3. Based on what we read in the website and through testing the prototype, the main changes we'd recommend are updating the flow of creating intentions, updating intentions, and responding to intentions.

We found that the update and send button seemed to act more like "save changes" . We also found that when we wanted to go back or exit from editing intentions we would have to "cancel". My biggest recommendation would be to implement a home page similar to the main screen you currently have, but this home page has an edit, and send button. When they're done editing they can click the save changes button at the bottom of the edit screen or if while editing they realize they liked their original list then they can use a back button to take them back to the home screen. Then once they return to the home screen after editing if they want to press the send button to send their updated list to the group they can.

Additionally, when users update their intentions list, we believe you can do away with asking the user if they'd like to use text or audio explicitly. Instead, having it all within one flow where it is default text but there are buttons that let you transcribe certain things would be helpful. Designing it similar to the audio message feature in iMessage currently is a good place to start.

In general, with task 1, we think you just need to work on simplifying the interface more. For instance creating an easier or simpler way to react to someone's intentions list and then a separate more involved way to comment on someone's intentions list.

We like the overall design and flow of your imessage extension and app. We just think the interface needs some refinement to make it easier to use, more efficient, and intuitive.

Severity Ratings

        0 - not a usability problem

        1 - cosmetic problem

        2 - minor usability problem

        3 - major usability problem; important to fix

        4 - usability catastrophe; imperative to fix

Heuristics

H1: Visibility of System Status
- Keep users informed about what is going on

H2: Match Between System & Real World
- Speak the users' language
- Follow real world conventions

H3: User Control & Freedom
- "Exits" for mistaken choices, undo, redo
- Don't force down fixed paths

H4: Consistency & Standards
- Words, actions, and UI elements should be consistent across the entire platform
- Follow platform and industry conventions

H5: Error Prevention
- Minimize error-prone conditions
- Remove memory burdens, support undoing, and warn your users when necessary

H6: Recognition Rather Than Recall
- Make objects, actions, options, & directions visible or easily retrievable

H7: Flexibility & Efficiency of Use
- Accelerators for experts (e.g., gestures, keyboard shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design
- No irrelevant information. Focus on the essentials.

H9: Help Users Recognize, Diagnose, & Recover from Errors
- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

H10: Help & Documentation
- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large

H11: Accessible
- Users can interact with the system using alternative input methods.
- Content is legible with distinguishable contrast and text size.
- Key information is upfront and not nested for screen readers.

- Purely visual or auditory content has text-based alternatives for users with low vision and low hearing.

H12: Fairness and Inclusion
- Users shouldn't feel that the design is not made for them.
- The design should meet all users' needs equally and prevent the reproduction of pre-existing inequities.
- It should not create additional burdens for members of disadvantaged populations.

H13: Value Alignment
- The design should encode values that users can understand and relate to.
- Conflicting collateral values should not emerge when the user interacts with the product.
- Encoded values should match users' values in a broad set of use-contexts.