Tele-Story

Reading together while apart

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M4: Prototype

HCI Capstone

Iowa State University

Spring 2016

Table of Contents

Prototype Strategy

High-Fidelity Approach

Using the Axure prototyping tool, I prepared a digital tablet mock-up to evaluate three of the primary flows: searching for a book, listening to a book, and recording a book. The resulting prototype for the *Tele-Story* project is primarily a high-fidelity user interface. Visual cues are included to help remind users that this is a prototype. For instance, the logo is represented by a placeholder image, and the bookstore image on the home page is watermarked. The sample book used to demonstrate supported tasks has a black and white cover and handwritten pages, which makes it is easily identifiable apart from other book images.

As the primary users include small children who cannot yet read, the design is dependent on the communicative qualities of images (Jarrett & Summers, 2010). For the page layout, I focused on the Gestalt Principles: proximity, similarity, continuity, and closed forms. I incorporated a visual motif, grouped buttons inside of control panels, and was able to avoid the need for any typing (Tidwell, 2011).

Though research indicates that low-fidelity prototyping, including paper prototyping, is appropriate for children ages 7 and up (Sims, Cassidy, & Read, 2013), my target hands-on users are as young as 2-year-olds. In his article, *Toddler First Usability*, Pinder Jonal acknowledges that toddlers "click things that look like buttons" (Jonal, 2015). This article gave me confidence that a high-fidelity prototype is appropriate, and possibly preferred for young users.

Also, as a primary goal of the product is to create a personalized experience, actual photos of the target evaluators are included so the children can identify areas pertaining to them and their families.

Tools and Process

To simulate the listening experience, I used Camtasia to make a recording of the sample book being read aloud by a volunteer. Individual audio files were created for the book cover, book pages, a greeting, and a closing. These files were uploaded to SoundCloud, then, linked to an inline frame in the Axure prototype. The inline frame is hidden from view in the prototype.

In addition to the listening task, the search and record tasks are mocked up using Axure. Using the responsive web design feature, I was able to create a prototype that can be used in a digital tablet, such as an iPad, which will enable users to perform the evaluation using a touch screen device.

Prototype Description

Prototype Web Link

The Tele-Story prototype is available for viewing online at the following link:
http://q46a6r.axshare.com/#c=2

Digital Tablet Application Tasks Supported

It's bedtime for Bruce. His mom, Liz, wants to play a book recording for him. She sits Bruce in her lap and holds her iPad where they both can see it. She opens *Tele-Story* and is presented with the home page.

Search and Listen Task Flows
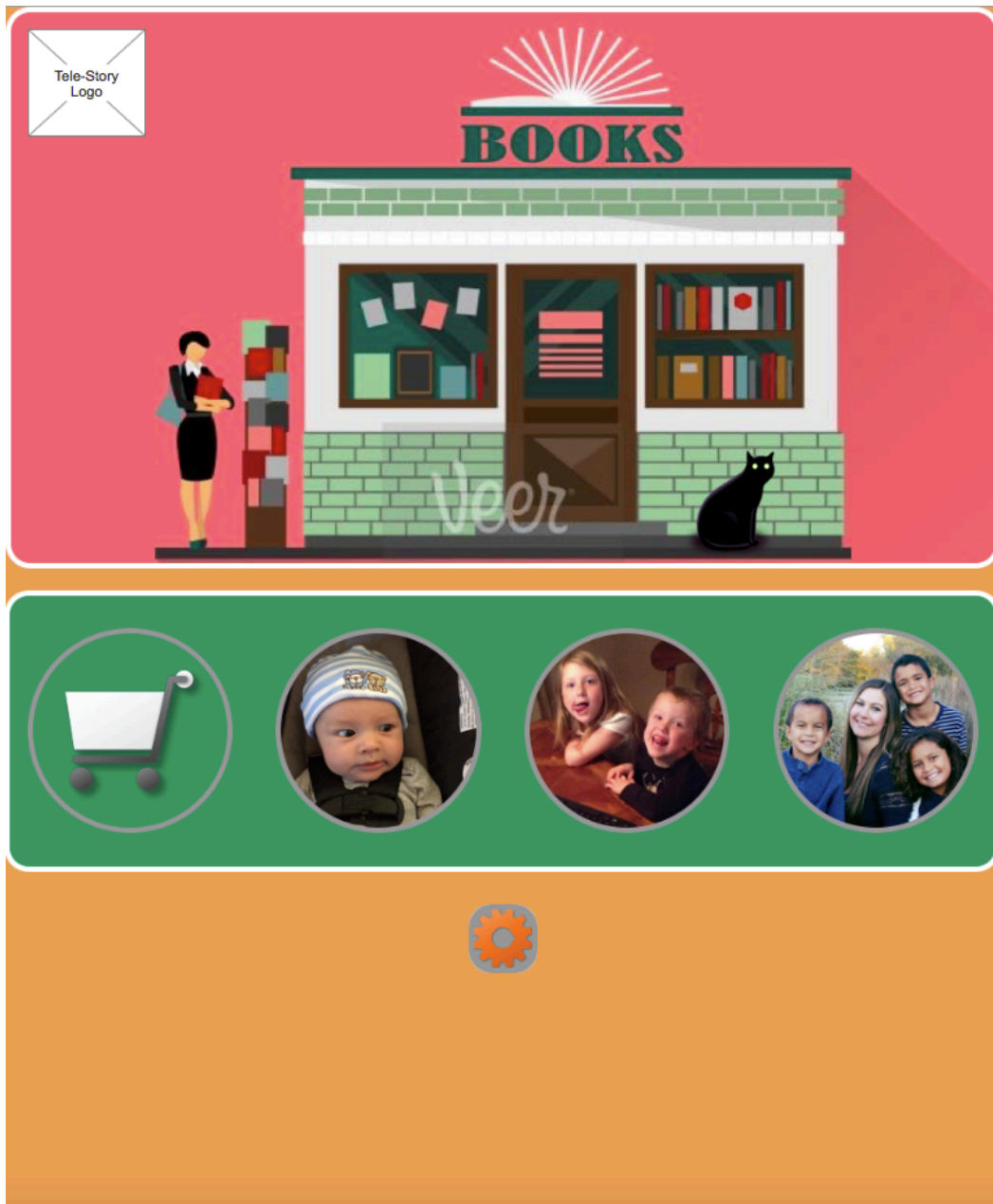
Liz taps Bruce's picture to open Bruce's personal library. She sees photos of all the family members that have recorded books for Bruce and all of the books in his library. Since this is the entire library for Bruce, a white circle highlights Bruce's image to indicate it is the active view.
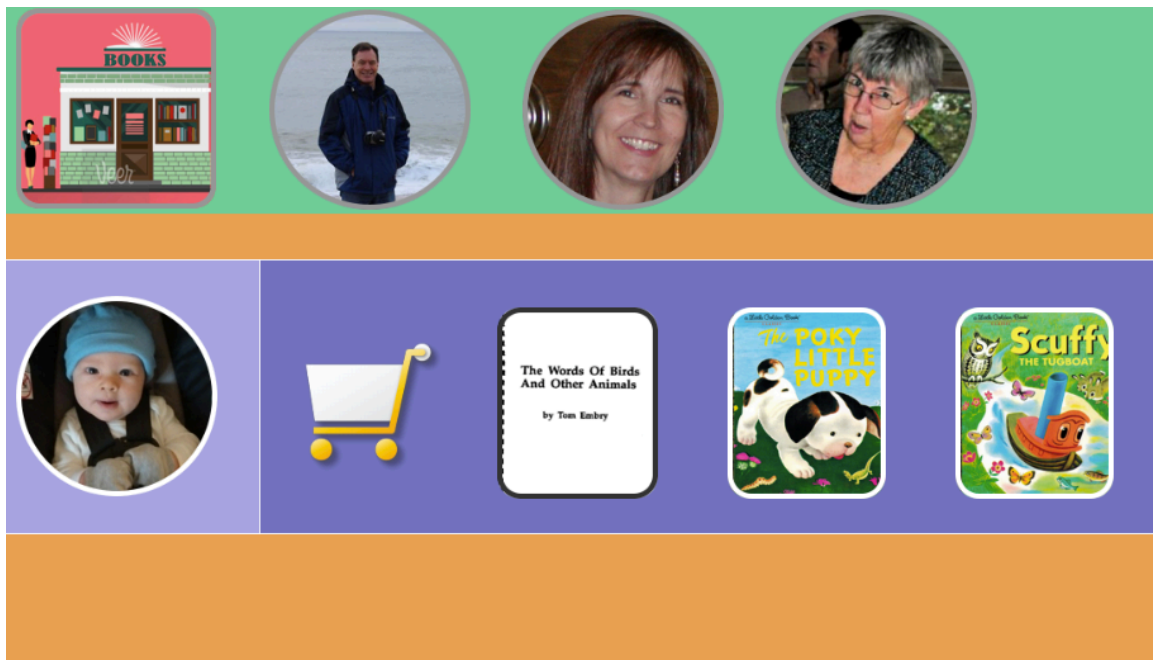

Liz taps each photo image at the top to see the books recorded by that specific person. The white highlight will indicate the active view. For example, when she taps the image of "Boompah," only books recorded by Boompah are displayed.
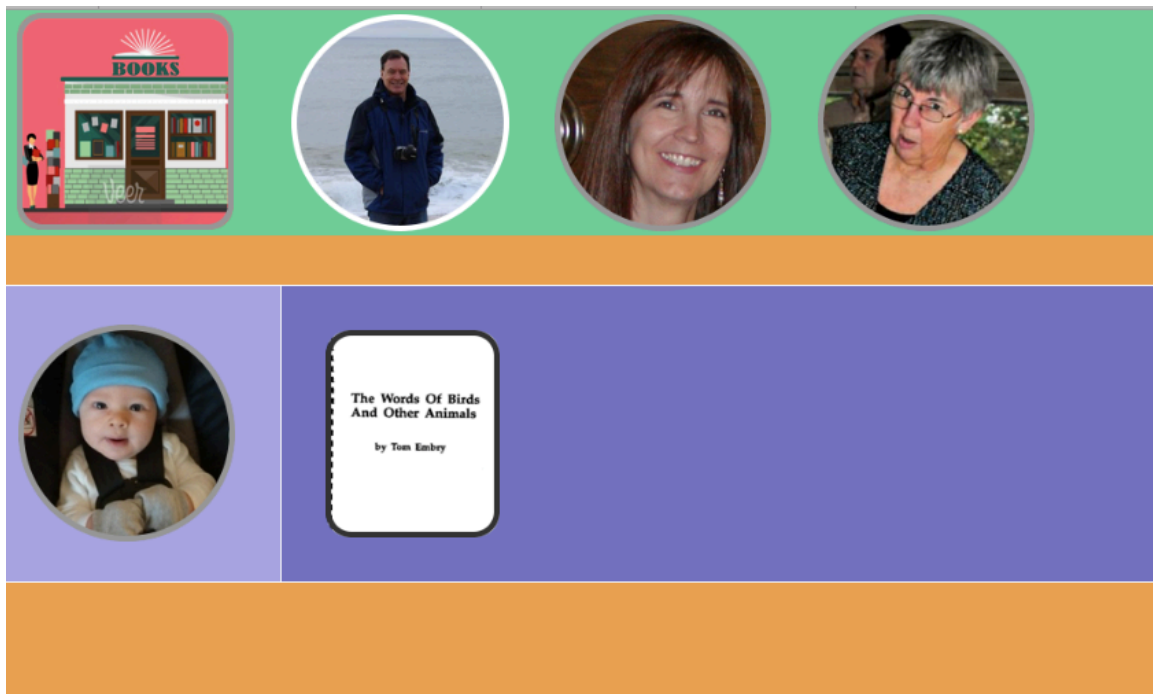
Liz taps the image of the book that Boompah recorded. She is presented with the first page of the "listen" task flow.
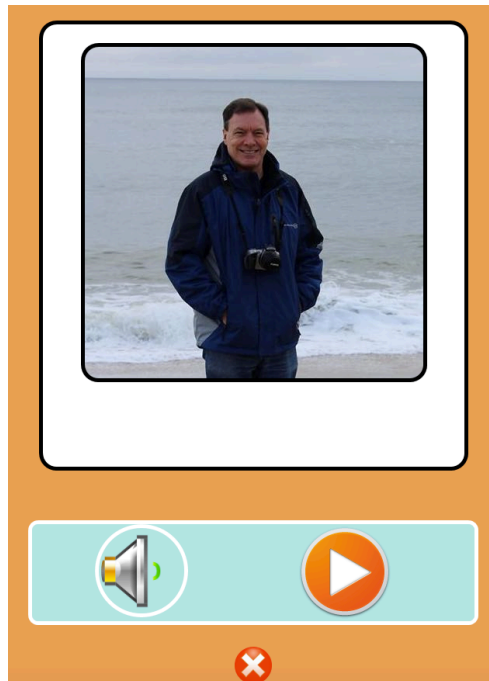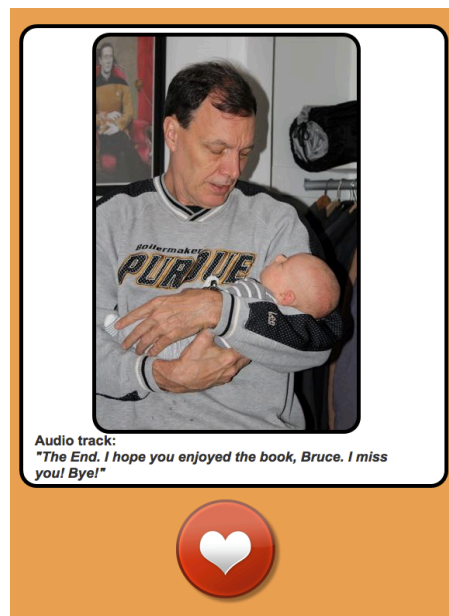

Liz taps the play icon to start playback, which begins with a personal greeting from Boompah to Bruce.

Audio track:
"Hi, Bruce. This is Boompah! I'm going to read a story to you. I hope you like it."
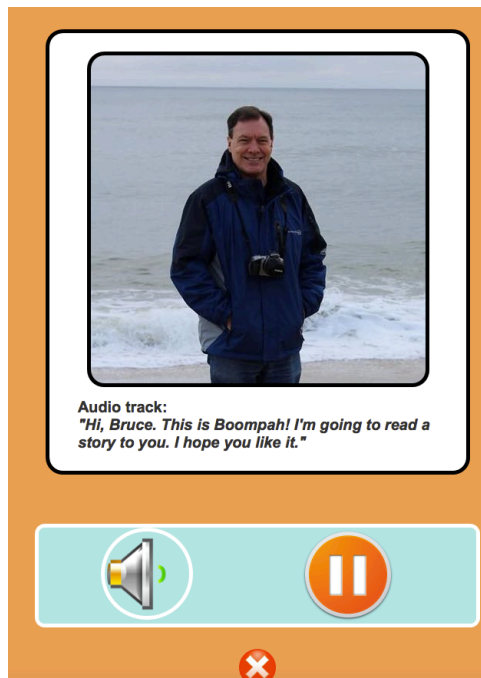
The pages auto-advance through the book. Liz can click the X icon at any time during playback to exit and return to Bruce's library.

The final page is a personalized closing.

Liz taps the heart icon, which returns to Bruce's library. Liz can play the same book, choose another, or click the image of the bookstore to return to the home page.

Mimi wants to record a book for her grandson Levi. She launches the *Tele-Story* application on her iPad. The home page appears.


Mimi clicks the shopping cart icon and is presented with the available books.

Mimi clicks the **Toddlers** icon to see books recommended for toddlers. She can click the **Babies** or **Primers** icons to see books in those categories, or click the **All** icon to remove a filter. The return to home page option is available by clicking the icon of the bookstore.
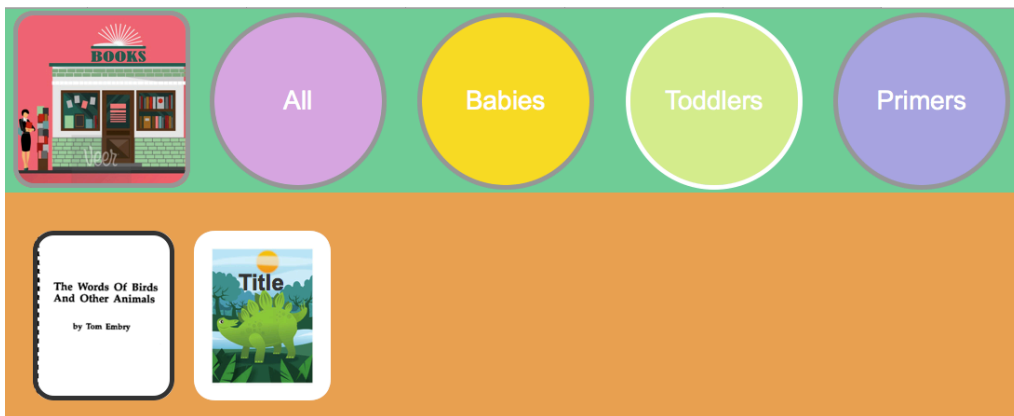
Mimi clicks the book cover for the first book to see details, which appear in a pop-up window.
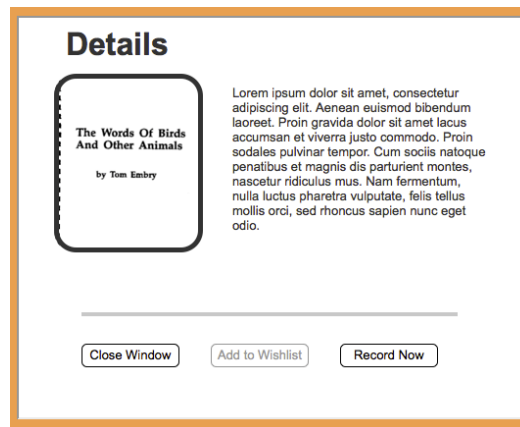
Mimi clicks **Record Now** to record the book for Levi. The option to review the book before recording is presented.
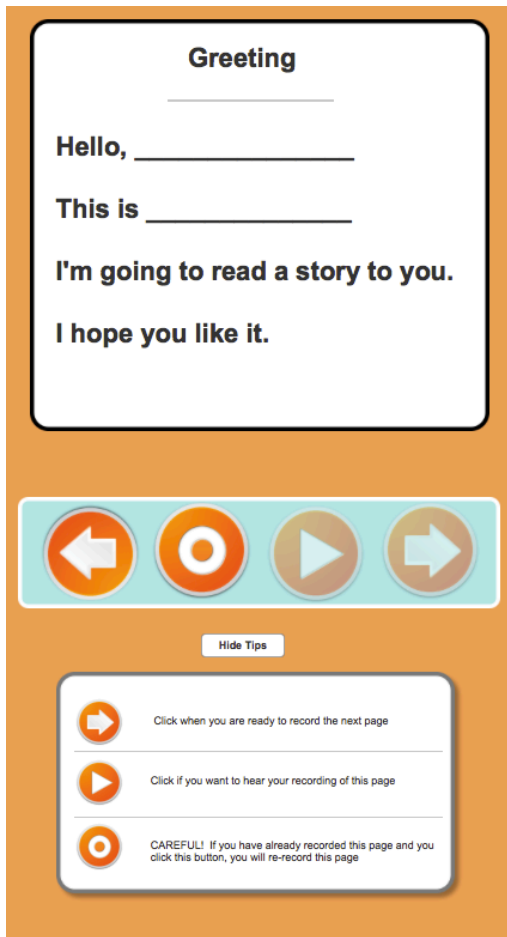
Mimi clicks **No, thanks** and the page to record a greeting is presented.

Mimi clicks **Show Tips** to get help with this page.

Mimi clicks **Hide Tips** to suppress the tips. The tips icon toggles **Show Tips** and **Hide Tips** as appropriate. The player control panel displays all of the controls for the record task flow. The button icons that are not applicable at any stage are disabled.

Mimi clicks the record icon and starts recording her personal message. The record icon changes to a stop icon. All buttons icons except the stop icon are disabled. A message indicating that recording is in process appears. Whenever the user is recording, the **Recording in Process** message will appear.

When Mimi finishes her greeting, she clicks the stop icon. The recording process stops, the message disappears, and all button icons are enabled. The options include paging back to the **Review Book** option, re-recording, listening to the recording she just made, or going to the next page. Tips are also available by clicking **Show Tips**.

Mimi clicks the next page icon. The cover of the book appears with the recording control panel and **Show Tips**.
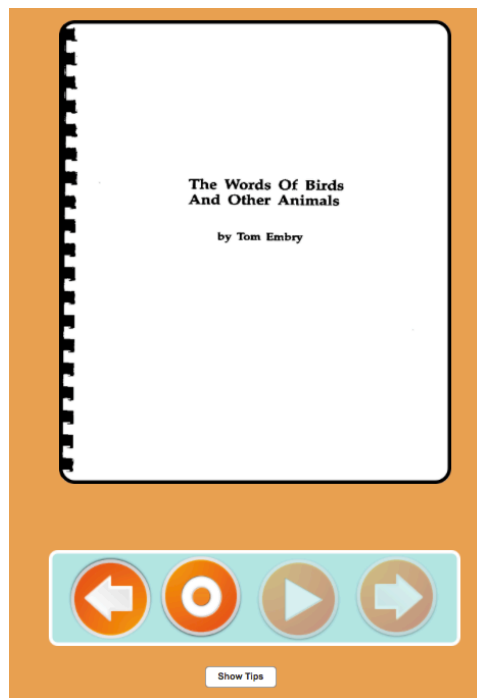
Mimi continues recording each page of the book, reading the words on the page, and optionally adding personal asides. The last page to appear in the record task flow is a closing page with prompts.

Mimi records a personal message, then clicks the stop recording icon, which enables all of the button icons in the control panel. Mimi clicks the next page icon to enter the task flow to send the recording to Levi. (The Send Recording task flow is not yet supported.)

Unsupported Tasks

The tasks described in the M3 design document that are not implemented in the prototype are listed below under the section heading identifying the reasons for excluding them at this time.

Time Constrained
- Review book before recording

- Sending/Scheduling Delivery of a newly recorded book

- Wish List scenarios:

    o   Adding a book to a wish list

    o   Searching for wish lists

    o   Recording a book in a wish list

Design Needed
- Receiving Thank You messages

- Account set up and configuration

- Saving incomplete recordings

- Recording chapter books

- Narrating an animated story

- "Point to" feature

Axure Limitation or Learning Curve
- Adjusting volume

Reflection

The prototyping experience I gained while working on *Tele-Story* has proven invaluable. For the prototype, I focused on the three core tasks (search, record, listen). Inherent in these tasks, is the concept of getting a book from one place (a bookstore) to another place (a family library), and more specifically, to the *bookshelf* of an individual child in a family. Prior to working on the prototype, I was mostly aware of the application's functions, answering the question "what can you do with it?" While working on the prototype, the concept of place became a challenge I realized I needed to work into the design.

Originally, I thought of a book as having two states: unrecorded and recorded. As such, it seemed plausible that the virtual world I was creating in the application could be a single space: one family library for all users within a family circle where all the books would be together for either the listening or recording tasks. My focus during this part of the design process was on filters to find books by a vast array of options: by topic, by age group, by most popular, by recipient, by recorded, and by not recorded yet. A problem I eventually recognized was that I had two very different user types using the same space for different tasks. As a result, I changed the design to support two different concepts of place: one to record and one to listen. During the prototyping, I discovered that the libraries can be used to identify space for a specific branch of a family, and the bookshelves could be used for individual children within that family. This approach works for the listening flow, but it does not readily provide a concept of place to support the recorder users. Many of the tasks described in the unsupported tasks section will need to be reworked through the design phase to determine where these users see their thank you notes, save recordings they want to finish, and upload profile pictures.

As I worked on the listen-to-a-story task flows, I experienced the challenge of designing for non-readers. Concepts as common as *Close Window* require an image in lieu of text. Having an application that is dependent on visual images for communicating tasks required that I spend time and effort on establishing a visual motif (Tidwell, 2011) during the prototype phase. Typically, I am comfortable with low fidelity, hand drawn, or mismatched look-and-feel experiences in the early prototype stages. Though most of the children in my user research are familiar with touchscreen applications, they have not participated in design sessions. Their experience is with finished products. Understanding the value of having a visual motif, even if it's not the final motif, to aid these users during evaluation presented the challenge of finding a suite of existing images to support the child users' tasks.

As a new user of the Axure tool, some of the earlier task flows I designed are not as elegant as later flows. Two key features that took time to grasp are the Masters and Dynamic Panels. I have quite a bit of clutter in my file that I look forward to cleaning up and tasks that I want to rework to take better advantage of these features.

Learning how to provide audio for the listen-to-a-story task flow was very difficult. Fortunately, Axure support is extremely responsive and provided example files and tips to help. A limitation with the prototype is that each page must be presented for the same amount of time. If the shortest page has 5 seconds of audio, and the longest has 15 seconds of audio, the short page will have 10 seconds of "dead air" before the next page is presented. Also, the stop icon stops only the "visual track," not the audio track.

I regard prototyping as an essential phase for refining the product. Prototyping enables the designer to discover awkward functions or task flows that may have not appeared awkward in the design. Though I have not had time to design solutions for the corner cases I discovered as I was creating the *Tele-Story* prototype, I have been able to prepare elegant ways to end partial or not yet supported task flows that I did identify.

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