Expert Review

An Expert Review is an analysis of our software by a professional user interface designer. The software is presented to the expert a mid-level development stage for review on the experts own time. These types of reviews are generally very costly to companies, so typically only a few are performed. The data gathered from an expert review consists of a Cognitive Walkthrough, including the assumptions made by the user and a step-by-step description of what the expert reviewer is trying to accomplish. The expert reviewer was also able to provide us with a list of Golden Rule violations and adherences, and described some minor design flaws in our software.

Method

We started by brainstorming a list of experts that we could ask to perform and expert review for our software. David McArthur is a soon-to-graduate student at NAU. He develops websites and interfaces professionally for the ITS department, which has made him an experienced UI designer. He has previous experience in psychology and excelled in a previous iteration of the User Interfaces course. He has become a prominent figure and role model for intuitive design in computer science. This made him the perfect candidate to conduct our study.

We presented him with an outline of the Golden Rules for reference, and an algorithm for performing a Cognitive Walkthrough. He used the latest build available at the time to conduct the study. When the study was completed, we reviewed the result thoroughly and began itemizing changes we should take into consideration for our interface.

Results

We reviewed the results and took all of the expert information into consideration. Below is a table of the Functional Specification that aligns with the notes the expert is referring to during the cognitive walkthrough.

|  |  |
| --- | --- |
| Function Specification | Cognitive Notes |
| View Tasks | Assume the icons mean events or items  Assume days can be clicked to edit them  Nice icons can be used to differentiate buttons, different look and feel for view pages |
| Add Task | More prominent button / large button to add new event to the day  Preselect day when Add Event is clicked |
| Edit Event | Click the event to edit it, doesn’t do anything |
| Edit Chores | Not sure what “Manage Chores” means, chores for just that day? |
| Edit Chore | Multiple ways of doing the same thing |
| Select Chore/Person | Doesn’t seem to be an alphabetical listing |

For the Golden Rules Review, we divided the data up into each rule. We decided it was better to analyze the review this way because it would help prioritize the complexity of each recommended change. Below is a table of the Rule, notes from the expert, and a list of Functional Specifications the note refers to.

|  |  |  |
| --- | --- | --- |
| Rule | Notes | Functional Specification |
| Consistency | Familiar interface, like most electronic calendars | View Tasks |
| Syntax for buttons is consistent, lists use “Back” instead of “Previous” and “Next” which is reserved for the calendar view, “Cancel” is only used for submitting changes | View Tasks, Select Chores/People, Add Person/Chore/Task |
| “No Chores to Display” instead of “No Tasks to Display” | View Tasks |
| Pop-up keyboard should be laid out like real keyboard | Add Person/Chore |
| No add/remove/edit buttons on the manage people page | Select Person |
| Designing for Evolving Expertise | No first time tutorial | View Tasks (default view) |
| No expert user options | N/A |
| Possibly no need for expert options | N/A |
| Feedback | No feedback when adding a Task/Chore/Person | Add Task/Chore/Person |
| No feedback during editing, or when canceling changes | Edit Person/Chore |
| Pretty easy to see changes, but some sort of test alert may be needed | Add Task/Person/Chore |
| Designing for Error | Most fields disallow saving when not all fields are present, except for Add Task | Add Task |
| Reversal of Action | People/Chores can be edited to fix errors | Edit Person/Chore |
| Can’t undo creating tasks, change time, or edit | Add/Edit Task |
| People cannot be removed | Remove Person |
| Sense of user Control | No problems |  |
| No Rote Memorization | Users have to remember what they are using keyboard for | Add/Edit Person/Chore |
| No indication of what you are selecting a Chore for | Select Chore |

Outcomes

Finally, we have taken each item from the expert into consideration. Below is a very brief description of what the expert said, and what changes we made or would consider making.

|  |  |
| --- | --- |
| Expert Notes | Revision Notes |
| Nice Icons | We have created an array of nice icons, additionally we plan to add icons for all navigational buttons and panel buttons. |
| More Prominent Buttons | We’ve considered adding functionality for users to access add and edit panels in multiple ways, this proved to be a success with further user testing. |
| Preselecting Days | With more time, we planned to implement a basic intelligent system, where days and schedule would be preselected or RECOMMENDED based on the type of chore and how the user initializes the creation of a Task. |
| Different Look and Feel for Calendar | This is one of our best suggestions, the “Previous” and “Next” text doesn’t seem to be enough to differential the different types of navigation, we have considered moving the buttons in closer to the date label, color coding arrow icons to put on the button would also help. |
| Alphabetical Listing | Chores and People should definitely be put in alphabetical order. |
| Popup-Keyboard Layout | One of the many struggles with swing, we would definitely make the keyboard layout match a real keyboard in a future release. |
| Buttons on People Page | Definitely a change for a future release, we would like to have a standard bottom navigation as well as the top forward and back navigation, we believe that it wouldn’t over complicate the interface be providing a few ways of accomplishing the same task. |
| First Time Tutorial | This is a viable option for future releases. |
| No Expert User Options | This is a very valuable comment. We have made it a priority to make this interface simple and easy to use. We have tailored in to fit a refrigerator where the use of a mouse or keyboard shortcuts would not be an options. However, it is not limited to a refrigerator; it was our main goal to make our interface fast! An expert user can benefit by being able to accomplish tasks quickly and effectively. |
| Missing Feedback | We have considered the addition of a non-intrusive but obvious message/confirmation of changes. We a user makes a change some kind of splash screen would appear to notify them, and then disappear and clicked or after a certain amount of time. This is definitely a goal for future releases. |
| Disallow Saving | Our add Person/Chore panel has been detailed and designed to a great degree, the Add Task panel needs work, and would be fixed in a future release. |
| Can’t Undo | There is not really any place for a big colorful undo or redo button in our interface, so improving the interaction for editing/removing a task would be essential for future releases. |
| Can’t Remove People | As mentioned earlier, the buttons from the Chores panel would need to be consistent with the buttons on the people panel because of how similar their uses and interaction is, this is an essential change for future releases. |
| Rote Memorization | There are a few changes that should be made when using the Keyboard, the title of the field you are using the keyboard would be listed in the title of the panel, the action that you are selecting a person or chore for would also be listed in the title for those panels. Essential for future releases. |