Functional Specification:

The iShare has some important functionality that will be discussed in this section. The main functionality consists of a schedule of chores, the user that will be doing the chore, and the list of predefined chores to be allocated.

Each section will describe the purpose and functionality along with the reason it is important to the project.

Schedule:

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| --- | --- | --- |
| Function | Description | Reason |
| View Task(s) | This is the main functionality of the schedule. The user is able to view scheduled tasks in various different ways. The view is **changeable** in that it can display daily schedules differently. It shows a *month view* by default with small icons indicating the chores that need to be accomplished that day. The *week view* shows a simple list of user-task pairs. The *3 day view* and *1 day view* show the time, user, chore, and a short description of the task; this is the most **detailed** view. | Provides a concrete interface to scheduling the chores and it compensates for the shortcomings of verbal communication. |
| Create Task | The user is able to schedule a time when they plan on accomplishing the chore. The event is set up to reflect a user that the chore is assigned to, the chore itself, and the timeframe in which the chore should be completed. An optional note can be added to the task. The user, task, and timeframe can all be assigned from this function. | Let’s all the other users know when you expect to use the resource. |
| Remove Task | The user removes a selected event from the schedule. The task view enters a remove task mode and the user picks which task to remove from the view, when a selection is made, it is removed and the remove mode is exited. | Allows for scheduling to change as need. This is core functionality for managing chores. |
| Show tasks for User | The user can select a User from the User View and choose to view calendar for that particular user. The view will then show all the chores for the chosen user. | Allows people to view chores by user, core functionality for filtering out chores that are assigned to yourself. |
| Skip to Day | Allows the user to choose a day/week/year to view immediately. A user can enter a day manually and when finished the calendar will jump to display that day, staying within the current view. | Provides quick access to future or past schedules. |

Users:

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| --- | --- | --- |
| Function | Description | Reason |
| Add User | This allows someone to assign a name to a picture of their choice. There are optional profile fields that the user can fill in. This information can be displayed in other places that are useful to the person reading the schedule. | Displays useful information to other users, and allows for easy lookup of a users schedule. |
| Select User | When an event is created the user designated to a chore should be selected. This will show the entire list of users and allow selecting with a simple click. This functionality is used primarily on the Add Event section. | Allows a user to be assigned to a chore and time. |
| Remove User | If a user will no longer be using the system, they can be removed. The person has to go into the manage section to remove a user and after verification they user will be removed. | Keeps only the necessary users. |

Resources:

Based on user reviews, we have come to the conclusion that users are not interested in scheduling devices. Users tend to use their own property and when sharing something verbal communication is the most efficient and effective way of resolving their needs.

Chores:

Based on recent studies, chores or tasks are something people can’t always keep track of in their heads. A pencil and paper is not always available, and people are sometimes reluctant to carry out a chore that needs to get done. We have tailored our project to be more user based, and informative as to what chore or task should be accomplished between what timeframe.

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| --- | --- | --- |
| Function | Description | Reason |
| Add Chore | Create a description of a chore and associate it with a picture for easy recognition. This is used to make a list of chores that can be assign multiple days and to multiple users. | Users should be able to easily create chores that can be assigned at will to a user and time. |
| Select Chore | Chores can be viewed and selected during the creation of the event. This will show a list of all the predefined chores, and an option to edit the list of chores on the fly. | Chores must be assigned to users during a time when an event is created. This is core functionality. |
| Remove Chore | If a chore no longer needs to be done or is no longer applicable to the living situation, it can be removed from the list of predefined chores. | Keeps the list of assignable chores to the minimum since it has the potential to get pretty long. |

Other Functionality:

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| --- | --- | --- |
| Function | Description | Reason |
| Text to Speech | The list of chores can be read off using a speaker connected to the computer or refrigerator. User information can be read by activating the speak command. Any confirmation dialog will be read if the dialog was activated as a result of a voice input. | The user doesn’t have to be standing in front of the refrigerator reading a little screen to know what chores need to be done. |
| Voice Recognition | The user can speak a short list of commands that can interact with the system, for example, “Tell me the schedule for today” would instruct the computer to read off the schedule for the day. Or “add user” would initiate the add user dialog and wait for input to fill in the fields. | The user can be anywhere in the house and manage the schedule without having to be in front of a computer. |
| Facial Recognition | Detect the user and automatically skip to their schedule and read the list. When a user walks into a room where there are responsibilities the list of tasks would be read to the user over the room speakers. | The computer can interact with the person without having to select who they are from a list. |

Performance Specification:

The following section describes the amount of training and time that it takes a user to figure out how to accomplish each task. We calculated these values by watching users flip through the pages of the example GUI and how long before they could move on to the next task.

Schedule:

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| --- | --- | --- |
| Task | Experience Needed | Time to Complete |
| View Events | The user must have a basic understanding of a calendar. The can navigate the calendar by using the interface to change what days are being displayed. | Clicking through days can take some time unless the “Skip To” option is used. On average < 10 seconds to find what they are looking for. |
| Add Task | Selecting users and chores is a matter of pairing them on in your head. The sorted and named list is easy to navigate, so a basic understanding of spelling is required. Selecting the date is similar to finding days on the calendar. | On average users were able to add an event in less than 30 seconds. |
| Remove Task | The user simply actives the “Remove Task” mode and selects which task to remove on the calendar view. Navigating to the appropriate day during the remove task mode may be needed, so the user would have to use their memory or pointing skills to access that day. | On average less than 10 seconds. |
| Skip to day | The user must have a basic understanding of numbers, and date format. The day can be entered and the calendar will bring that day in to view. | Less than 10 seconds. |

Users:

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| --- | --- | --- |
| Task | Experience Needed | Time to Complete |
| Add User | The user must have a basic understanding of a keyboard layout in order to use the onscreen keyboard to type in any optional fields. They can select an avatar or picture to represent the user being added; this is the only requirement of this functionality. | Less than 30 seconds. The user was able to select an avatar. |
| Select User | When adding a Task the user is require to select a person to designate the task to. This required them to make a selection from the list of users created using the Add User function. | Less than 3 seconds depending on their picture association skills. |
| Remove User | The user must go in to “Remove User” mode and make a selection for which user to remove. | Less than 5 seconds based on consideration. |

Chores:

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| --- | --- | --- |
| Task | Experience Needed | Time to Complete |
| Add Chore | User must be able to pick a picture to represent the chore. Optional chore name can be added. | Less than 1 minute. |
| Select Chore | The user must be able to select a chore to assign to a person. | Less than 20 seconds. |
| Remove Chore | The user must put the chore list into “Remove Chore” mode and then click the chore to remove. | Less than 10 seconds. |