

Fernanda Moreno
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CS 3750: Human-Computer Interaction
Homework 2

Topic: Family Message Center

Individual Mini Design: Pet Bowl that records the last time a pet was fed

Context: While some families may designate different people to feed their pet according to a schedule, some families mainly rely on whoever is around the house at the time to feed the pet. In some cases, such as in my own family, it is unclear as to whether or not the pet has already been fed, and it is not always easy to ask and make sure because the family member that may have already fed the pet may be out and unable to respond. If family members are unsure about whether or not the pet has already been fed by another family member, they risk either over-feeding the animal, or not feeding it at all. A proposed solution would be a bowl that keeps track of the last time it was filled with food. When it is filled up, the bowl would record the time and display it on its side. The time would remain on the bowl screen even after the pet has eaten its food. Once the bowl is filled again, it would record that new time. That way, family members are able to indirectly communicate about the last time the pet was fed. In other words, the medium of communication (regarding the “Has [inset pet name] been fed yet?” question) is the pet bowl.

Users: Family members who own a pet all share the responsibility of feeding their animal. This group of users consists of children responsible enough to feed and take care of animals to adults who provide for these animals. It is important to note that this design would also be beneficial to pet owners who live alone and particularly to pet owners who suffer from Alzheimer’s or any other form of constant memory loss that would make users forget about the last time they fed their pet themselves.

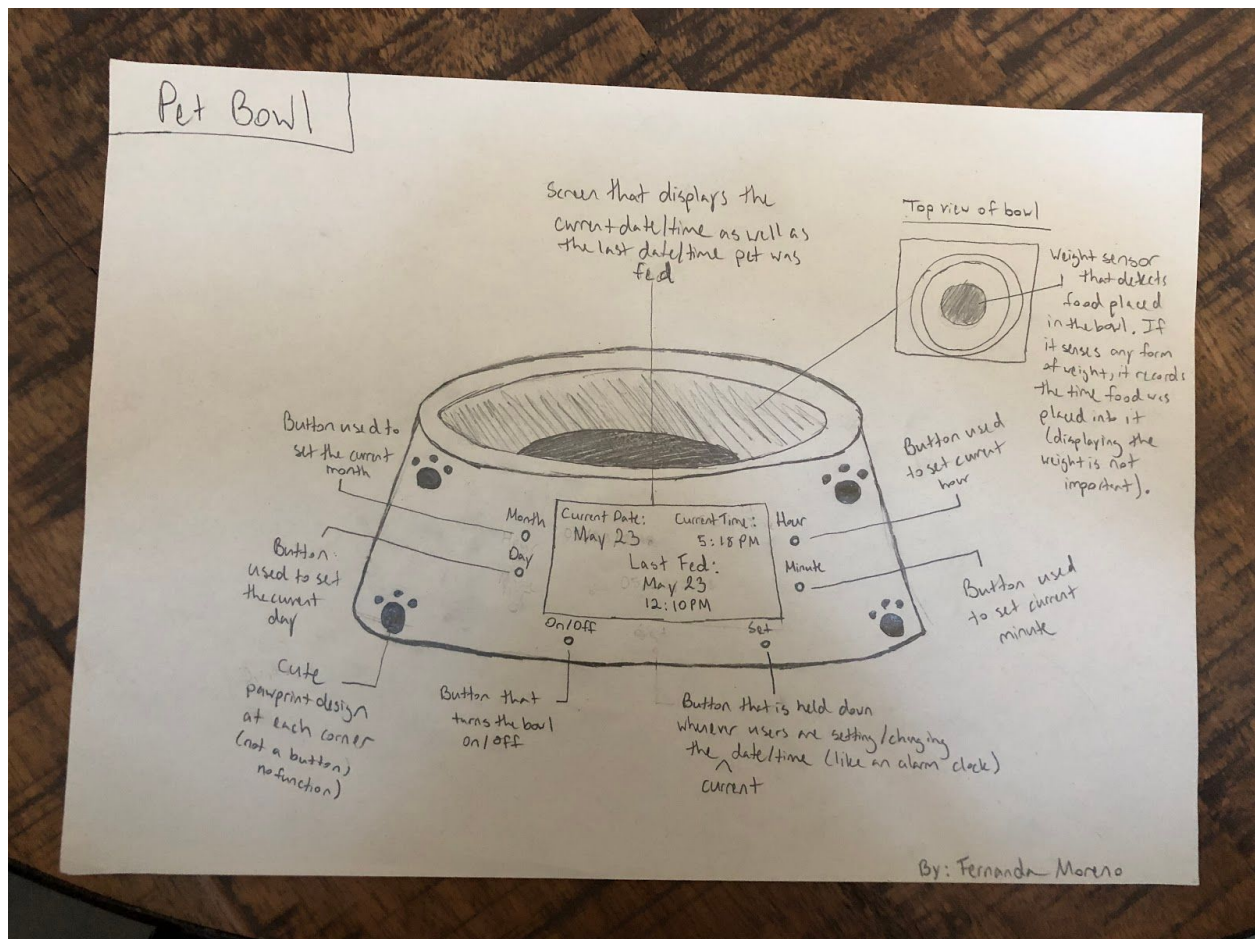
Bowl Features and User Task: When the bowl is first purchased (at a Target near you), users are required to set up the bowl by placing batteries into it and setting up the current date and time using the buttons beside the screen, which is placed on the side of the bowl. Since the bowl has not been used yet, the “Last Fed:” time would read as “[first 3 letters of month] [day]” and “--:-- [AM/PM]” below. In smaller letters at the top of the screen, the bowl would display the current date and time to provide comparison with the last time the bowl was filled. After the initial use and as users wonder whether their pet has already been fed, they check the side of the bowl and see a small screen that displays the last time their pet had been fed. If they see that the pet has not been fed for several hours, then users would simply proceed to feed their pet as normal by placing food directly into the bowl. The bowl would sense the weight of the food and directly update the “Last Fed” time to the current time of when food was inserted into the bowl.

Additional Feature: Another feature would be a supplementary app on your phone that connects to the bowl and notifies the user if there hasn’t been any food placed in the bowl for several hours. Users will be able to customize how many hours pass between each bowl-filling, depending on how often their own pet needs to eat. After a certain amount of time has passed since the bowl was last filled (customized by the user), the app would send a notification to users reminding them that it is time to fill the bowl. The app would update as the bowl’s last fed time updates, so if user refills the pet bowl before they are scheduled to be reminded, then the app uses the most-recently updated “Last Fed” time and reminds the user a specified number of hours after that new time. This is also helpful in facilitating communication among family members because it notifies them that the dog hasn’t been fed yet, or in a certain amount of hours. For instance, let’s say mom is out running some errands and she gets a reminder on her phone saying that their dog Princess has not been fed. The 10 year old at home may not have a cell phone (or the app) yet, so mom may call the house phone and remind the 10 year old or anyone else at home to feed Princess, since she has been notified by the app and would not have known otherwise that Princess has not been fed yet.

Assumptions:

- The pet is a dog, cat, or any animal that requires a food bowl placed on the floor somewhere in the house
- Pet eats at the same times each day
- Family members share responsibility of feeding pet
 - Note: The bowl/app is useful even for a single pet owner
- Every family member is responsible and old enough to feed the animal on a consistent basis
- At least one family member has a cellular device that allows them to download the supplementary application that reminds them to feed the pet (however, app is not required)
- The app will be able to provide notifications as long as the user has data or WiFi service
- No other items will be placed into the bowl besides the pet's food
- Bowl is not compatible with dish washer and must be cleaned by hand. Soap and water is fine and we're assuming it is waterproof
- Bowl is turned off when being cleaned, and when it is turned on again, the Current/Last Fed time would remain the same as before it had been turned off
- If the pet's food has been untouched for hours, users would replace the food or at least add a bit more to it so the bowl senses an addition of weight and is able to update its "Last Fed" time

Sketches

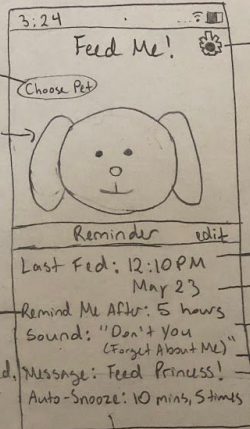


(Don't You Forget to)

Feed Me App

Allows user to select image of dog, cat, or any pet that they have the responsibility of feeding
ex: If user had a cat, the image displayed on the right would be a cat.

Users can choose how much time since pet last fed must pass before they are reminded. In this scenario, the user wants to be reminded to feed their dog after 5 hours since last feeding it. Users can change the number of hours that pass whenever they want. For instance, if they feed their dog in the evening, they may want to be reminded in more than 5 hours, considering sleep and the time that they feed their dog the next day.



Settings button that allows users to set up connection between app and bowl.

The app takes this information from the bowl it is connected to and updates as the bowl updates its time.

Users are able to choose the ringtone of the alarm/reminder using any of their own songs or default tones

Users can choose what the alarm/reminder will say when they are notified that it is time to feed their pet

If users miss or are busy during the first reminder, they can choose how much later/how often they would want to be reminded again.

Notes:

The "Feed Me" app takes information from the bowl which it is (wirelessly) connected to at all times and reminds users to feed their pet after a certain number of hours. This app is specifically* meant to be connected to the Pet Bowl, but is welcome to inspire any other Pet Feeding Reminder apps if they don't already exist (similar to Birth Control pill reminder apps).

* - but not required

By: Fernando Moreno