Product Interview Reflection paper

Class: EE 585

Team Name: Go Getter

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Introduction

With wandering being a major issue when it comes to helping people who are dealing with dementia, there was a need for a solution. The Grandma's House system is a smart solution for the problem stated. Our system provides the caretakers with a solution that will be able to identify when the risk of a person with dementia is wandering around unattended and could seriously injure themselves. During the week of November 7th we had the opportunity to ask several people with diverse backgrounds a series of questions aimed at helping our system cover a multitude of problems it could face. The information was gathered and was analyzed by all team members. The team interviewed two nurses at dementia & Alzheimer's care centers, and a faculty member Md Rakib Ur Rahman. The interviews covered these points, was there a product in place for something like wandering, pricing, typical things we should know about the patients to improve our project, and placement of the product to remain concealed.

Body

Interview (1): Sandy from ComfortCare:

ComfortCare is an assisted living facility for dementia patients in Wichita, KS. We informed her that our project is aiming to help caregivers of dementia patients. We asked her how often the patients wander around and how far could they wander? She said they are allowed to wander around the inside of the building, but they must be accompanied by a caretaker outside the building. Then we asked what kinds of sensors and systems that facility is using and how do they

respond? Sandy said they have a bedtime alarm system in place that will sound an alarm when it's time for them to go to bed.

Aslo, we asked how much did they spend on each sensor product and did they have all the rooms installed with the product? She didn't have a price right now but she also mentioned that healthcare products are expensive. We asked Sandy would she spend $200 for a sensor system like ours? She replied yes, that would be an awesome price range. Besides the strain gauges, Sandy said, the facility is currently not using any types of motion detection or motion sensors to detect patients are leaving their rooms. They would like our system to be able to send a text message to someone that is on duty there and not to someone that hasn't checked in for the day. Also, the caretakers would like it if they would be able to turn off the system when it is not needed.

Interview (2): Md Rakib Ur Rahman:

Rakib is an PhD electrical engineer student and a TA for the course. We set up a meeting with him to ask about some technical issues the project may have. We asked him about various problems regarding the project's functionality. We had a question for him about our battery powered board. After we did my calculation for the power consumption, we thought that as the battery is drained, the internal regulator of the Arduino won't be able to keep up. Rakib advised us that we should do some testing and get data voltage drop and the internal load of the assembly first before deciding on if we want an extra regulator.

When asked about the environmental factors (different lighting, door frames, bed weights) that can affect the system. He gives a suggestion about an extra motion sensor and how we can arrange it around the bed frame. This extra

motion sensor can eliminate some of the factors that we are worried about. One other problem we asked him is about the project's communication method. When the system gets interrupted, we think it will not reboot correctly. Although he cannot answer the question right away, he will connect us with someone who is knowledgeable about the subject.

We asked him if we can use finger touch and he responded that we will work on that if we are done with the test of our project.

Interview (3): Michelle from Brookdale:

Brookdale Senior Living owns and operates senior living communities and retirement communities across the United States. We were able to talk with Michelle for the interview. Michelle is currently working as a nurse for a Brookdale facility in Wichita. We informed her about our project which aims to help caregivers of dementia patients. She said that the sensor system would cause a restraint to the staff and that they cannot use such a sensor system because it would go against their company policy. Instead, they use call lights, fall mats, and frequent checks (10 – 20 minutes). When we asked if the facility had any system in place to prevent wandering. She mentioned that their building has an exit alert system which would go off when someone without a passcode wanders outside.

Conclusion

Using these interviews, we can break down the main points that can be learned regarding target market, product features, functionalities and pricing:

At first, the main vision for the project's market was for resident homes. It was designed to help family members of dementia patients to look after them

better. But after the interviews with the care facilities, we learned that the scope of the project should be modified toward these care centers. We have decided that extra features should be added based on the feedback from these care centers. The first changes would be instead of the 24/7 sensor system, we will need to add an on/off button (could be a switch, keypad or fingerprint scanner). Second, the sensor system should be able to integrate with their existing employee management system. This integration would require a lot of time and coding so we have decided to include this to next semester's workload.

As for the current functionalities of the product. We have decided to add an extra motion sensor near the bed of the patient. This sensor will share the same Arduino board as the strain gauge. This extra component will help create a more accurate alert.

The main focus of this product is reliability and the affordability of each product that we can provide for the customers. From the interview we conclude that the customers want the products installed in their facility if the cost is affordable for not only the facility but also the patients they are caring for. We know it would cost a lot less to install the system to help prevent wandering and monitoring the situation before the accident happens than in the situation that the patients wandering around get lost or get hurt.