

Jerrie S. Project – Detailed view (v1)

By Bill Weis

Requirements:

1. Be able to control her full electric Invacare bed using eye gaze (Tobii Dynavox)
2. Need the ability to contact caregiver using eye gaze (Tobii Dynavox)

Solution – High Level:

1. We are now referring new requests for voice activated bed controllers to Oratell.com
2. We developed a solution where Jerrie could contact a caregiver using eye gaze control.

Details of the Solution

1 – Voice Control her bed – Seven years ago when we began this volunteer effort, there were no commercially available voice controllers for beds, so we developed solutions for several different bed models. Our goal was two-fold, to provide free voice controllers for people who due to a debilitating disease or injury could not regularly use the hand control, and secondly to learn as much as we could about the positive impact of a voice solution for the people we serve and to share those learnings with the bed industry. As we approach 2 million voice commands over those seven years, the results are clear. Beyond the benefit of giving back independence to those who lost it due to their physical situation, we have provided them with a solution that helps manage their comfort level to the point of avoiding bed sores. The only customers that we know of that developed bed sores were directly related to being in the hospital for a few weeks where they no longer had the ability to voice control their bed.

We have seen much progress in the bed industry with regards to manufacturers providing an optional voice solution for their bed. The exception to this is in the area of long-term care beds and for that we recently discovered a commercially available solution from a company called Oratell.com. Since our goal was never to compete with a commercially available solution, we are now referring all new customers to Sales@Oratell.com. Oratell was able to help Jerrie control her bed using Tobii Eye Gaze.

2 – Contact caregiver using eye gaze – Jerrie lives with complications of ALS and needed a way to contact her caregiver. We used a combination of a off-the-shelf solution from AdaptiveTechSolutions along with a custom box we built that contains a relay. The push button switch that comes with the Attendant Call solution has a 1/8" plug that can be used for external control of the push button. Our relay box is powered by an Amazon Smart Plug, and the normally open contacts of the relay are connected to the 1/8" plug. The relay is configured to energize (closing the NO contacts) upon power. The smart plug is controlled by her eye gaze device which activates an Alexa Routine. The Routine we developed has three actions: Turn on the smart plug, wait 5 seconds, Turn off the smart plug. Their solution comes with a wall mount noise maker and a pager-like device that you can carry as you move around the house or nearby outside. These wireless receivers work with 433Mhz signals so the distance when outside is limited to the area close to the house.

