

## Technology 2017 – A Connected World

This was the 5<sup>th</sup> year I attended CES (Consumer Electronic Show) in Las Vegas. Now in its 50th year, CES showcased the connected future of technology spanning 2.47 million net square feet of exhibit space with 3800 exhibiting companies and 177,393 industry professionals, including 55,000 from 150 countries outside the US. My journey, my interest and my questions were specific: How will our senior citizens directly benefit from these innovations in their daily lives?

There were some amazing exhibits at the show: robotics; self driving cars; connected homes; smart cities; digital health; assistive devices; educational enhancements. Here are just a few that caught my interest.



### Smart Cane

If the cane recognizes someone, it alerts a visually impaired user by vibrating and transmitting a sound signal. In case of a fall or emergency, the cane can be used to send an alert to a caregiver, who can choose to respond with a signal so the cane user knows help is on the way. This connected walking stick can also predict problems based on the user's movements.



### Reading Glasses for the Sight Impaired

This device is clipped on the frame of the glasses and will read aloud the words where it is focused on the printed page.



### 3d-printed Robotic Arm with Sensory Touch.

Designed for amputees, this arm goes one step further than the prosthetics available now that are printed with a 3d printer. It not only senses touch, grabs, and manipulates objects, but also sends a signal to the brain of the user about the texture and weight of the object. It can be "trained" to let the user know what commonly used object it has touched.

### Fruit and Veg Scan Wellness Coach

Among other features, this device will let you know the nutritional composition of your food. Simply place the food on the sensor plate (here you see cheese) and you will learn the calorie, carbohydrate, weight, and percent of your daily personal allocation.



### All Terrain 4 Wheel Drive Wheelchair\*

This wheelchair can go up and down the rockiest slopes. It enables people with multiple sclerosis and spinal cord injuries to use the same machine both indoors and outdoors. It is operated simply by arm rest controls or if you're a caretaker, instead of conventionally pushing the chair from behind, you can walk side by side and drive this via iPhone.



### Smart Belt\*

A belt that automatically deploys airbags over the hip when a fall is detected. Fall-in-progress technology deploys airbag protection around the hip, immediately prior to impact, in order to reduce hip impact, automatically and within a fraction of a second.

### Snap ECG

SnapECG is a user-friendly wearable product. Collecting real-time electrocardiogram by connecting to a smartphone or smart device, which helps transfer complex ECG waves to simple messages, make it popular and easy to understand.



### Self-stabilizing Hand Tremor Anti-Tremble Gyro Spoon

It is an intelligent tableware with the function of detecting and offsetting hand tremor, designed to help people avoid embarrassment and inconvenience caused by hand tremor when having meals, offering an easy and stable way for those who have problems with their eating. Helps people with hand tremor eat without stress.

### Robots, Robots, Robots



They were everywhere, designed to attend to every need.

Imagine the one on the right wandering around a senior community center or in a care facility. The face will be someone familiar... a staff person, a resident, a famous entertainer... and could be rotated. It would be available to answer question by a tap on an icon. Examples: "Show me the bus schedule" or "Call a resource person because I have a question" or "I want to hear some music. Take me to a menu of 50's hits". This robot is used in the San Jose airport.



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\* 2 years ago these prototypes were presented in an Aging 2.0 conference in Sacramento

Five years ago, when I first attended the event, the majority of the exhibitors and attendees were young or middle aged men. This year it was quite different in terms of gender and age and there were a number of vendors who were specifically interested in the aging population.. Every year I come away from the show with the same impression. For four days this huge venue invited individuals from all over the world to share ideas, engage with each other, exchange information, meet and learn. It was crowded and confusing, but everyone was getting along... no arguments, no fights, no violence, no contentious encounters. I passed a table in the coffee shop where a woman from Japan and a man from Bolivia (we all wore nametags with our city/country information) were having an animated conversation in French. This event could be a model for our world.

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