Wearable Device to Translate American Sign Language (ASL) into English

Gomes, Abishek

Speech and hearing impaired people use hand gestures as their primary mode of communication. There are many different forms of hand gesture languages, the most popular being ASL (American Sign Language). Speech and hearing impaired people have enjoyed the advent of these standardized sign languages for communicating with each other. The main downside to this mode of communication is the fact that they cannot communicate with non-communicators of sign language, which is predominantly the population at large. This means in order for them to communicate to people who don't know any form of sign language would need a translator (a person who is capable of translating sign language into voice and vice versa). This presents a challenge to speech and hearing impaired people, as sign language translators are not available all the time (example: during and emergency or life threatening situations) and can be very expensive. This wearable glove device presented here seeks to address that challenge. The wearer could simply gesture hand signs (ASL) which then would be automatically translated to English and displayed on a smart phone wirelessly. This would negate the need for an actual person to be present to act as a sign language translator, and therefore speech and hearing impaired people can communicate freely to the general population.

Awards Won:

Third Award of $1,000

Patent and Trademark Office Society: First Award of $3,000

Synaptics, Inc.: First Life Science Award of $2,000