technology today

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Elon Musk's Neuralink Getting Ready for Human Trials

This past July (2020) Elon Musk's Neuralink medical implant received a coveted FDA breakthrough device designation which is a major step forward toward human trials and eventually bringing Neuralink to market. At a very recent live streamed event, Elon Musk showed off what Neuralink can now do as he tried to entice the best and brightest young engineers to join his team to take Neuralink to the next level. He was not only looking for engineers but also people with experience bringing a product to market.

So what exactly is Neuralink and what can it do? Neuralink is a very small electronic device that is implanted into a skull and connected to the neuron clusters in their brain. See photo 1. As far as what it can do I will quote Musk's description. Musk at this event said Neuralink is "a Fitbit in your skull with tiny wires with the senses you would expect to find on a smartwatch or smartphone; like inertial measurement, temperature, pressure…there is a lot of things this device could do relative to monitoring your health and telling you if you had a heart attack or stroke as well as some convenient features like playing music…sort of like if your phone went into your brain."

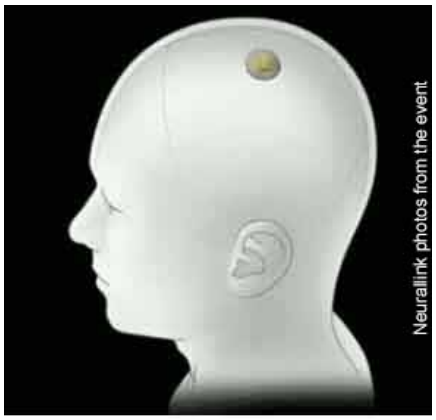

Photo 1 Neuralink in dummy's head

The robot that is located next to Musk in photo 2 is actually designed to perform the total insertion operation automatically after the medical team sets up the patient for the surgery. See photo 3. I expect that up till now, even though Musk joked that he might already have one in his head, the surgeries have all been done on animals. During the event Neuralink was perfectly capable of mapping out the physical positioning of every joint of a pig as it moved around its environment.

Photo 2 AI Surgical Nuralink Robot

Photo 3 Surgical robot implants Neuralink on pig without assistance

See photo 4. This information, in time, could be used with an exoskeleton power suit by a paralyzed person, to restore their full physical ability to move including walking, running, and full use of their hands, arms and feet. After the surgery all physical body motion would be controlled by the person's brain without any need for conscious thoughts. This 6 minute video (https://youtu.be/Joaed_OZmt4) shows highlights from the presentation and you can find the entire 1 Hour 13 minute streamed event online at https://youtu.be/Mp6_ZHHGIF8

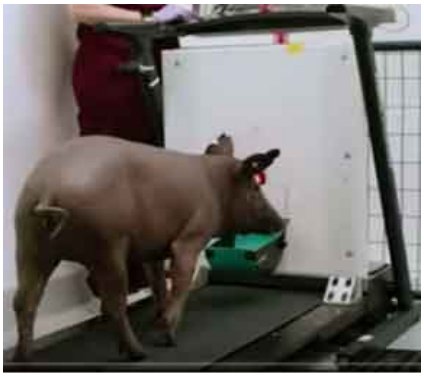

Photo 4 The Neuralink is accurrately reading each physical movement of the pigs limbs

Taking it a Step Further

1. If you were given the opportunity to program a Neuralink chip what attributes would you give it?
2. Would you be willing at some time in the future to have a Neuralink chip implanted in your brain?

Alan Pierce, EdD, CSIT is a technology education consultant. Visit www.technologytoday.us for past columns and teaching resources