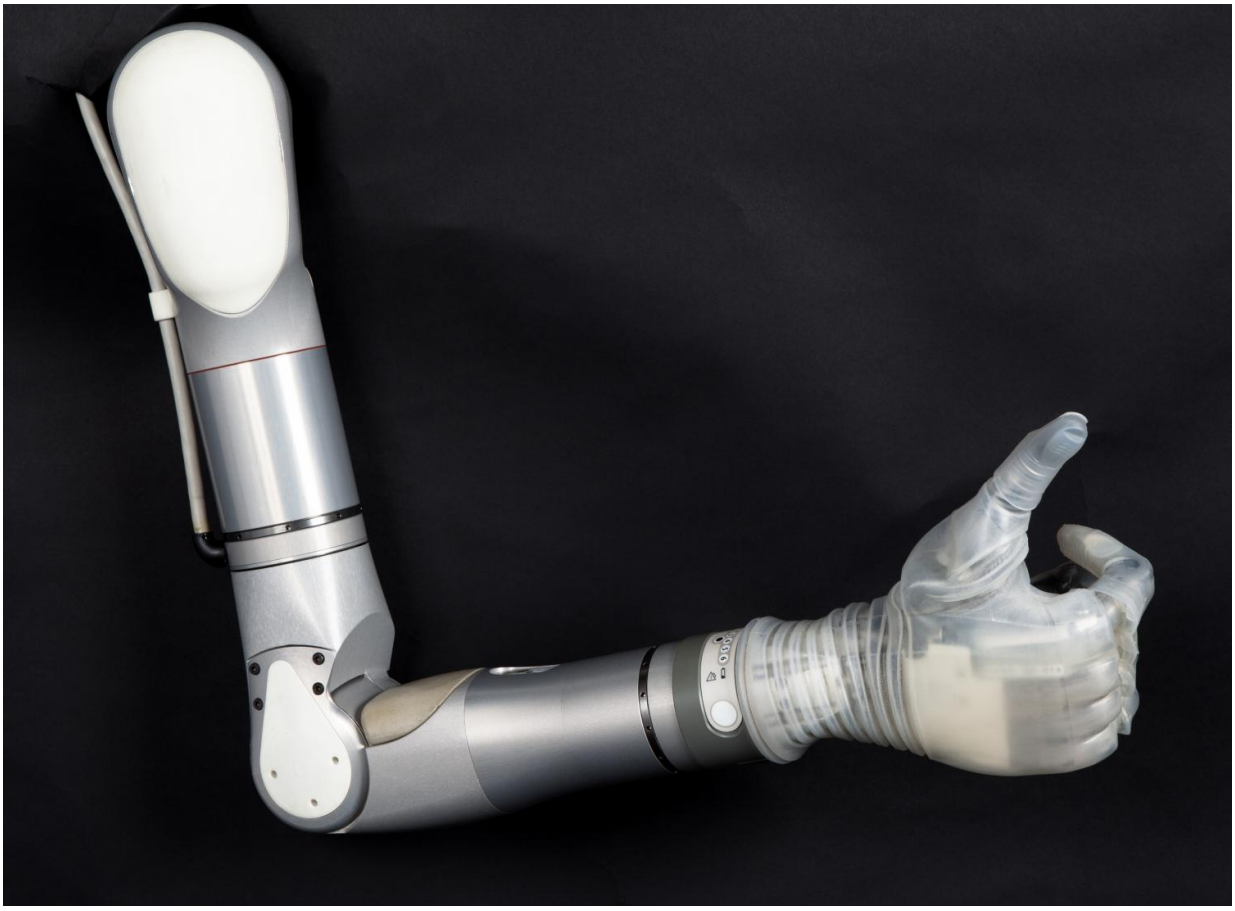
Mobius Bionics accepting names of people interested in LUKE arm

July 11 2016, by Nancy Owano



Credit: Mobius Bionics

(Tech Xplore)—A company is planning to bring a groundbreaking prosthetic arm to market later this year. The news is that Manchester,

New Hampshire-based Mobius Bionics is preparing the LUKE Prosthetic Arm for launch this year.

Background story: This is a prosthetic arm that was developed by DEKA Research & Development Corp as part of a DARPA prosthetics program which carried the goal of coming up with an advanced electromechanical prosthetic upper limb with near natural control, supporting independence and improved quality of life for amputees.

Mobius Bionics is now accepting names of people interested in owning one of the first LUKE arms, according to the company announcement, which did not include a price.

The LUKE arm, said the announcement, is the first prosthetic arm cleared by the US Food and Drug Administration (FDA) in the new product category for integrated prosthetic arms.

What is so special about the arm? A rudimentary description of its capabilities indicates this may be very good news for those in need of enhanced support for desired independence and better quality of life:

The powered shoulder lets the person reach overhead or behind the back; the powered elbow has enough strength to lift a bag of groceries from the floor to the table; a powered wrist has enough range of motion and precision to hold a glass of water overhead or at waist level without spilling; four independent motors and conforming grip are made for delicate and heavy items; a sensor can tell how firmly something is being grasped and informs the user; there are ways to control the arm, including electromyographic (EMG) electrodes and foot-mounted measurement sensors. (The LUKE arm may be controlled by intuitive wireless inertial measurement units that are typically worn on top of the shoes, said Mobius Bionics.)

The LUKE arm offers up to 10 powered degrees-of-freedom, said the company; its site highlighted the characters in the word LUKE as Life Under Kinetic Evolution.

Orthopedic Research and Reviews has a recent article, "New developments in prosthetic arm systems," which noted how early developments in cosmetic and body-driven prostheses, dating some centuries ago, have been evolving ever since. Control features are getting more sophisticated, the authors said, with options for multiple sensor integration and multi-joint articulation.

Last month, *3DPrint.com* had a report dealing with what we may see in the future, amputated limbs replaced with something that is much closer to a natural limb than a prosthetic. The report said that a group of researchers from Australian institutions "is studying the way the human arm communicates signals to the brain," and are working on "prototyping a robotic arm that would use 3D printed microchips to facilitate communication between implanted electrodes and natural tissue and muscle."

More information: www.mobiusbionics.com/home.html

Citation: Mobius Bionics accepting names of people interested in LUKE arm (2016, July 11) retrieved 25 September 2023 from https://techxplore.com/news/2016-07-mobius-bionics-people-luke-arm.html