

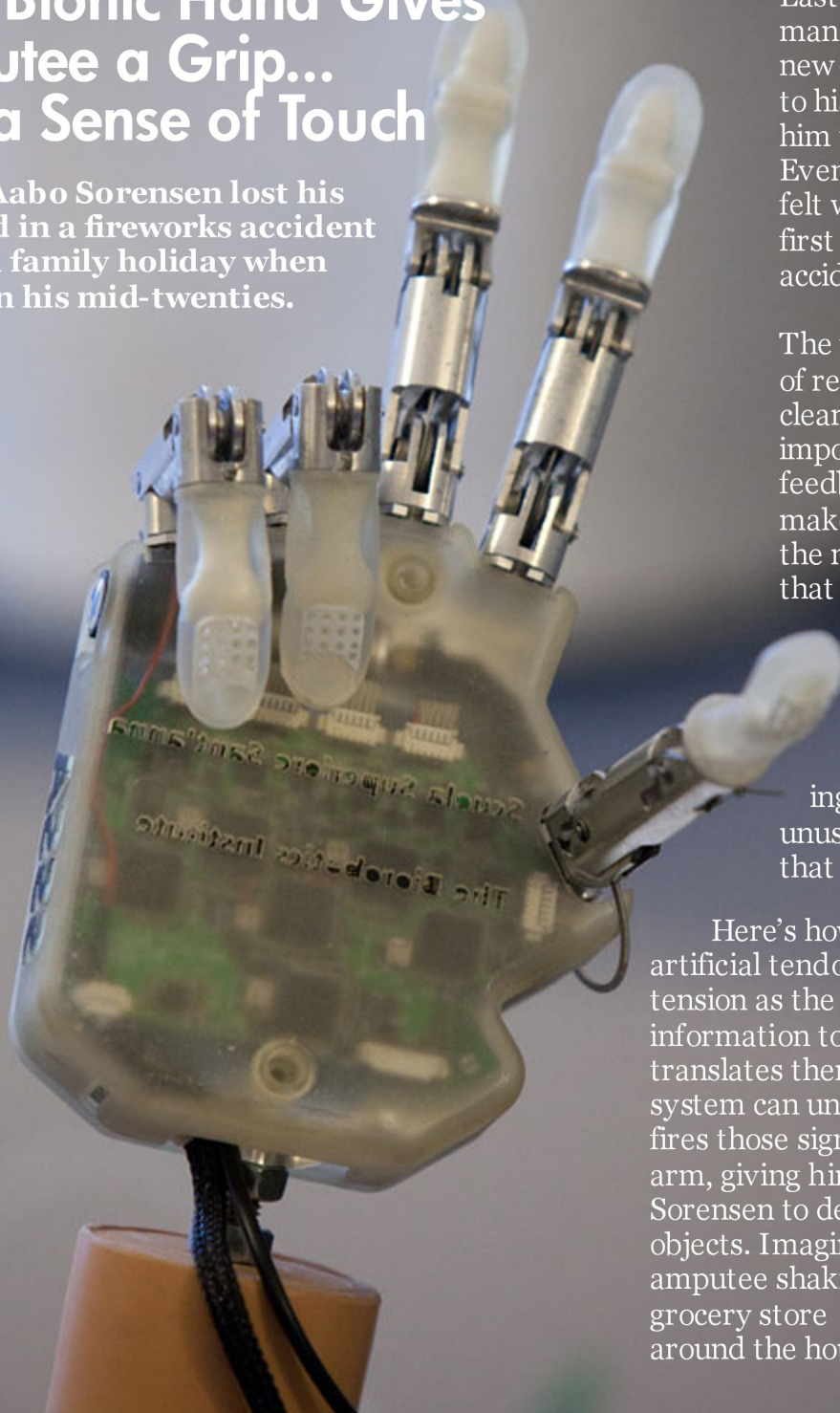
# GIMPY

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A QUARTERLY PUBLICATION OF STUMPS "R" US  
A WHIMSICAL SUPPORT GROUP OF CHEERFUL CRIPPLES  
WHO CAN ANSWER ALMOST ANY QUESTION YOU MIGHT HAVE  
ABOUT LIFE WITHOUT ONE, TWO, THREE OR FOUR LIMBS.

## New Bionic Hand Gives Amputee a Grip... And a Sense of Touch

Dennis Aabo Sorensen lost his left hand in a fireworks accident during a family holiday when he was in his mid-twenties.



Last year, the 36-year-old Danish man got a chance to test out a new prosthetic hand that connected to his nervous system and allowed him to grip and manipulate objects. Even more remarkably, he actually felt what he was touching for the first time in the 9 years since his accident.

The technology itself builds on years of research, but the study may be the clearest demonstration yet of the importance of building sensory feedback into prosthetic devices to make them better able to perform the motions of everyday life. And in that sense it points to where the field of neural prosthetics is heading. Electrodes implanted in the stump of his amputated hand allowed Sorensen to make basic grasping motions with the hand. What's unusual about this new prosthesis is that it adds a sense of touch.

Here's how it works: Sensors in the artificial tendons that control the fingers track tension as the hand moves; they send that information to a nearby computer, which translates them into signals a person's nervous system can understand. Then, the computer fires those signals to electrodes in the upper arm, giving him a sense of touch. This allowed Sorensen to determine the shape of different objects. Imagine how useful this would be to an amputee shaking hands, picking up fruit in a grocery store and performing tasks at work or around the house.