

## **"Little flash" as bionic eye brings amazed woman some sight**

Thuy Ong, Reuters

A bionic eye has given an Australian woman partial sight and researchers say it is an important step towards eventually helping visually impaired people get around independently.

Dianne Ashworth, who has severe vision loss due to the inherited condition retinitis pigmentosa, was fitted with a prototype bionic eye in May at the Royal Victorian Eye and Ear Hospital. It was switched on a month later.

"All of a sudden I could see a little flash ... it was amazing," she said in a statement.

"Every time there was stimulation there was a different shape that appeared in front of my eye."

The bionic eye, designed, built and tested by the Bionic Vision Australia, a consortium of researchers partially funded by the Australian government, is equipped with 24 electrodes with a small wire that extends from the back of the eye to a receptor attached behind the ear.

It is inserted into the choroidal space, the space next to the retina within the eye.

"The device electrically stimulates the retina," said Dr Penny Allen, a specialist surgeon who implanted the prototype.

"Electrical impulses are passed through the device, which then stimulate the retina. Those impulses then pass back to the brain (creating the image)."

The device restores mild vision, where patients are able to pick up major contrasts and edges such as light and dark objects. Researchers hope to develop it so blind patients can achieve independent mobility.

"Di is the first patient of three with this prototype device, the next step is analyzing the visual information that we are getting from the stimulation," Allen said.

The operation itself was made simple so it can be readily taught to eye surgeons worldwide.

"We didn't want to have a device that was too complex in a surgical approach that was very difficult to learn," Allen.

Similar research has been conducted at Cornell University in New York by researchers who have deciphered the neural code, which are the pulses that

## "Little flash" as bionic eye brings amazed woman some sight

Published on Electronic Component News (<http://www.ecnmag.com>)

---

transfer information to the brain, in mice.

The researchers have developed a prosthetic device that has succeeded in restoring near-normal sight to blind mice.

According to the World Health Organization, 39 million people around the world are blind and 246 million have low vision.

"What we're going to be doing is restoring a type of vision which is probably going to be black and white, but what we're hoping to do for these patients who are severely visually impaired is to give them mobility," Allen said.

(Reporting By Thuy Ong; Editing by Elaine Lies and Robert Birsell)

**Source URL (retrieved on 05/25/2013 - 12:28am):**

<http://www.ecnmag.com/news/2012/08/little-flash-bionic-eye-brings-amazed-woman-some-sight>