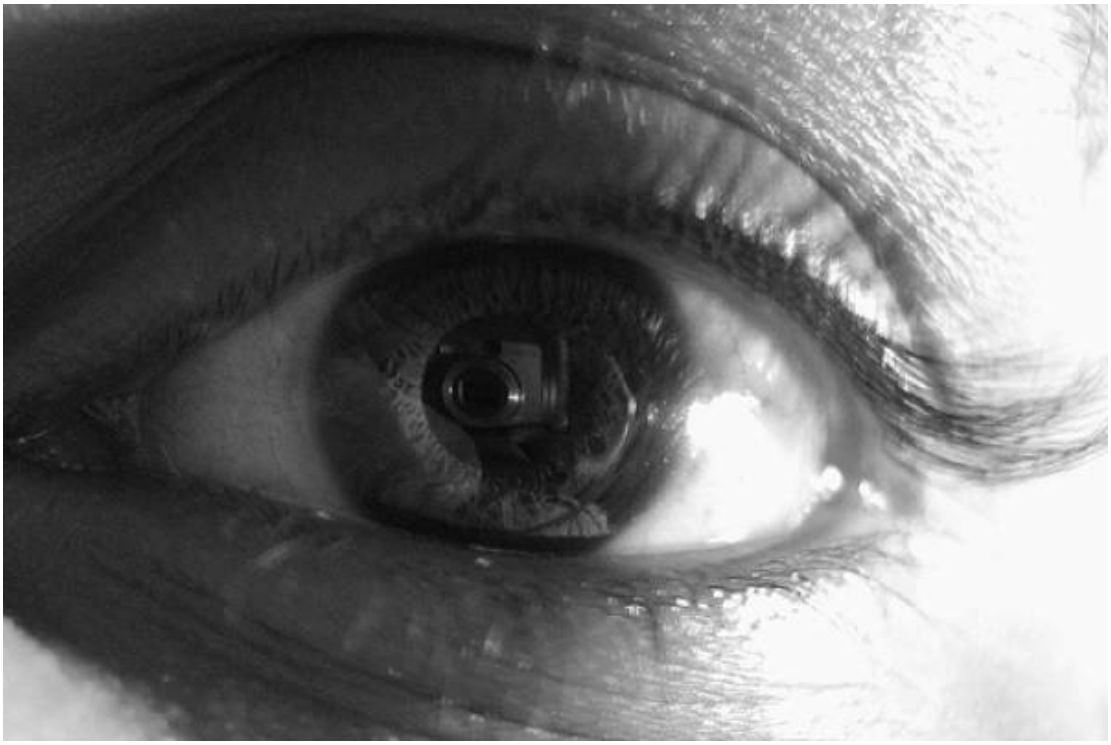
Science

Scientists take one step closer to creation of Bionic Eye

by Stevie Smith - Aug 8 2008, 06:33



U.S. scientists successfully create curved camera shaped like a human eye. Image: Geodesic/Flickr.

Using conventional sensor materials, scientists working out of the United States have created an eye-shaped camera that could potentially enhance the performance of consumer products such as digital cameras -- and perhaps even lead to the future development of prosthetic bionic eyes for the blind.

With their findings officially published this week in the journal Nature, Yonggang Huang of the Northwestern University in Evanston, Illinois, and John Rogers of the University of Illinois at Urbana-Champaign, say they were able to solve the longstanding problem of how to place a camera across a curved surface without fracturing its microelectronic elements.

The scientists successfully worked around the problem by developing a flexible, mesh-like material consisting of tiny squares that house the camera technology's necessary photodetectors and electronics. Those individual squares are connected to one another via a wired network that enables the whole mesh to fit and mould to a

curved surface without breaking.

“This is the first time we’ve demonstrated a camera on a curved surface to really make it look like a human eye,” commented Huang in a telephone interview with the Reuters news agency, while Rogers enthused in a statement that the team’s approach will allow camera electronics to be applied in places that were previously inaccessible.

Supported by the National Science Foundation and the U.S. Department of Energy, the Illinois-based scientists say their digital camera boasts the size, shape and layout of a human eye, and will enable increases in depth of vision when taking photographs.

“Currently when you take photos, the middle part of the picture is very clear but when you go to the edge, it is not so clear,” explained Huang, before outlining that the new curved technology “will make the entire picture clear.”

Beyond its obvious quality applications in the world of consumer electronics, the team claims that its breakthrough could also be used to provide better scanning and imaging equipment for the medical industry, and could even be used to help develop an artificial retina or complete bionic eye.

While the curved camera is already functioning well alongside computers, Huang notes that one of the main stumbling blocks associated with applying the curved digital camera as part of a replacement human eye is getting the technology to successfully interact with the brain.

Talkback

page: **1**

BionautAug 8th, 2008 - 17:06:23

I'm not an engineer, but there are several issues that are not clear to me. First of all, I can't tell from the article how the camera is powered; what is the energy source for the camera? Secondly, how would the image be stored or transferred to a computer? I know the scientists are working on the stumbling block of getting the camera to communicate directly with the brain, but how about perhaps in the near future having the camera send its images wirelessly?

page: **1**

Add your comment (no registration required)

Science
Index
Features

News

Latest

OCZ hits 250GBs with its Core Series V2 SSD drives
Press conference: Bigfoot hunters insist their find is real
MBTA sues to prevent talk – security by obscurity at its best
Q&A: Gwyn Fisher of Klocwork
Apple iPhone users struck by conversation killers

In The Tech Herald

Home
Hardware
Software
Security
Internet
Networking
Gadgets
Entertainment
Science
Current Affairs
Other Languages and Sites
Monsters and Critics
Deutschland (Monsters and Critics)

Site

About Us
Contact Us
The Team
RSS Feeds
Privacy

The Fine Print