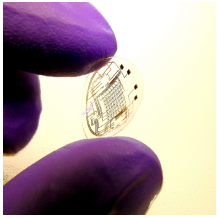


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By: Bogdan Botezatu, Hardware Editor



Reading the newspaper while crossing the street may be the last thing you'll ever do
University of Washington

[The Bionic Eye: Fully-Fledged LCD Display In a Contact Lens](#)

It's up to you whether you'll be the next Terminator or just a peaceful web surfer

Just when we thought that the four-panel [curved monitor from Alienware](#) was the next big thing in the display industry, researchers at the University of Washington announced a new type of hybrid contact lens that will bring to life the Terminator within you. The engineers' breakthrough will open new possibilities to the optics industry, such as HUD overlays and immersive displays. The starting point of this new technology is the implementation of a microscopic manufacturing or self-assembly hybrid contact that has a microscopic imprinted circuit with light emitting capabilities. The result is a flexible, biologically-safe contact lens that can render information directly on the ocular surface. This kind of bionic display has been largely promoted in miscellaneous science-fiction movies such as "Terminator" or the "Bionic Woman", where they were used to zoom in on far-off scenes, get additional information about the environment, or even to create virtual crosshairs. However, this technology can be used for more down-to-earth approaches, such as surfing the web while traveling, although this might have you killed in a car accident. The new technology may seem brand new and shiny, yet it's hardly new. There is a similar patent filed with the United States Trading Agency back in 1997 (United States Patent 5682210), that described a similar process. "Looking through a completed lens, you would see what the display is generating superimposed on the world outside," said Babak Parviz, a UW assistant professor of electrical engineering. "This is a very small step toward that goal, but I think it's extremely promising." The first implementations will be a little more practical than displaying information directly on the eyeball, such as automotive use. Drivers will be presented essential information such as speed, fuel and so on directly on the windshield. The video gaming industry will be able to completely immerse gamers into the virtual environment, while specially crafted lens will allow you to read the newspaper on your way home. "People may find all sorts of applications for it that we have not thought about. Our goal is to demonstrate the basic technology and make sure it works and that it's safe," said Parviz, who heads a multi-disciplinary UW group that is developing electronics for contact lenses.