

Digital Tattoo Interface

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Jim Mielke introduced the Digital Tattoo Interface during the Core 77 Greener Gadgets Design Competition in February 2008. It is a Bluetooth enabled cell phone that is also a tattoo. It has pixels on the inside which light up to be visible, but is only a concept at this time.

The digital tattoo interface introduces the idea of having a cell phone installed in your body which is “waterproof and is powered by pizza.” The plan for this concept is to have a two by four inch tattoo installed into your left forearm. Your arm is left completely blank when not in use, with the exception of one dot in the lower right hand corner of the interface, marking an on-off button for the screen. When this button is pressed a typical telephone keypad shows up next to a display that will even show a video of the person on the other end of the line.

The interface is made up of silicon and silicone to be flexible during heavy exercise situations. The installation of this phone requires a surgery in which an incision is made in the person’s arm to permanently implant the interface. It is tightly rolled and unfurls underneath the skin and above the muscle in order to keep the incision small. The interface also connects to an artery and a vein by two small tubes. These tubes connect to a blood fuel cell roughly the size of a quarter. This allows blood to flow in from the artery, convert the blood’s glucose and oxygen into electricity, and send the used blood back through the veins to the heart. The interface runs entirely off of blood and never needs any recharging or battery replacement.



The top of the silicone insert is a touch screen that can be pressed through the surface of the skin. The way the tattoo will show up is through the use of something very similar to electric ink, in which millions of microscopic ink capsules change colors and move around to form a picture or text. The same type of matrix of pixels is tattooed on the skin above the interface, with positive and negatively charged particles that form the same image as the microcapsules.



This product is Bluetooth enabled so that it will wirelessly connect with anything necessary for a regular cell phone. It also offers many great health benefits. It continually monitors for any blood disorders, and alerts the user if there is a problem present. If the person’s blood stops flowing for any reason, it has the ability to dial 911, using power from a small part of the blood fuel cell that stores energy for emergency use.

Reference:

<http://www.core77.com/competitions/GreenerGadgets/projects/4673/>

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