

Implantable Identification Technology: VeriChip™
Thomas Cavaliere
ELE 282 Biomedical Engineering Seminar I
Biomedical Engineering, University of Rhode Island
Kingston RI 02881
March 4th 2002

VeriChip is an implantable identification device developed by Applied Digital Solutions. The chip is the first of its type intended for use in humans; similar devices have been made for identifying animals (livestock). The chip is implanted using a needle-like device and requires monitoring by a doctor for several weeks to ensure no infection develops and that the chip does not shift position.



VeriChip: 12mm by 2.1mm or about the size of a dime

The chip can be encoded with personal information ranging from the patient's name to information on other implanted medical devices such as pacemakers. In the future full medical records could be stored on this device. Also on the horizon is the ability to track a person who has this implant by satellites. The company claims that the use of VeriChip will always be voluntary.

One benefit of this chip is that it can be used to store information needed by emergency medical personnel, such as known allergies, medications taken and any other conditions that would need to be known of an unconscious patient.

Only an external scanner held inches away from the skin can read the chip. The chip has no power supply and therefore no battery. It contains a

magnetic coil that is activated when the scanner is run across the skin. It then transmits a radio signal from a tiny transmitter inside the chip. The scanner picks up the signal that can then be displayed on a computer, printed out, or sent to an FDA approved storage location over the Internet or telephone lines.

The company also produces a controversial tracking device called Digital Angel. This device is not implanted, but worn on a wristband. This device and the VeriChip have privacy groups outraged.



A similar product developed by Applied Digital, Digital Angel, is a device that tracks the wearer's location by satellite. Someday, the same technology could be incorporated into the VeriChip.

Religious groups are also concerned calling this the "Mark of the Beast" (Revelation 13:16 He (the antichrist) also forced everyone, small and great, rich and poor, free and slave, to receive a mark on his right hand or on his forehead, so that no one could buy or sell unless he had the mark, which is the name of the beast or the number of his name). These groups warn that someday these devices will be mandatory, and that you will not be able to "buy or sell" unless you have one of these chips – and that is very possible. The government is looking into these types of devices for possible security purposes. The idea of a national identification system has been suggested, but is still far off. For now this device will mainly be used for medical purposes.