

Medical first

HOW THE SYSTEM WORKS

Computer software replaces the damaged spinal cord as the communication highway between the subject's brain and hand muscles. At present, the system is not mobile and can be used only in a laboratory.

1 The signals generated by the brain's motor cortex area, which controls movement, cannot reach the subject's hand muscles due to the spinal cord injury.

2 A pea-sized chip is implanted in the motor cortex area. The chip is attached to the top of the skull to a "connector" linking it to a computer.

4 The muscles receive their instructions from an electrode sleeve worn on the subject's right forearm.

3 The signals from the brain are deciphered by the computer and are rerouted to the hand, wrist and finger muscles.

