Summary

The invention concerns an adaptive, sensory-motor encoder equipped with a central control unit (3) for signal processing functions, monitoring functions, checking functions and/or external intervention functions having a group of adaptive spatio-temporal filters for the purpose of converting sensor signals into stimulation pulse sequences, and equipped with an interface (2) for coupling the encoder (3) with an implantable microstructure (6, 7) for stimulation of nerve or glial tissue, whereby the interface is executed in bi-directional design. Thus, along with control of nerve cells and administration of active substance monitoring of sensor signals and monitoring of sensor signals and biophysical parameters of spontaneous activity recorded at the implant site is also possible.

(Figure 1)

Sworn to and subscribed before me this 23 day of Aug 1999

Rita E Teubner

RITA E. TEUBNER
Notary Public of New Jersey
My Commission Expires 7/1/04

Charles Teubner