

Medical devices

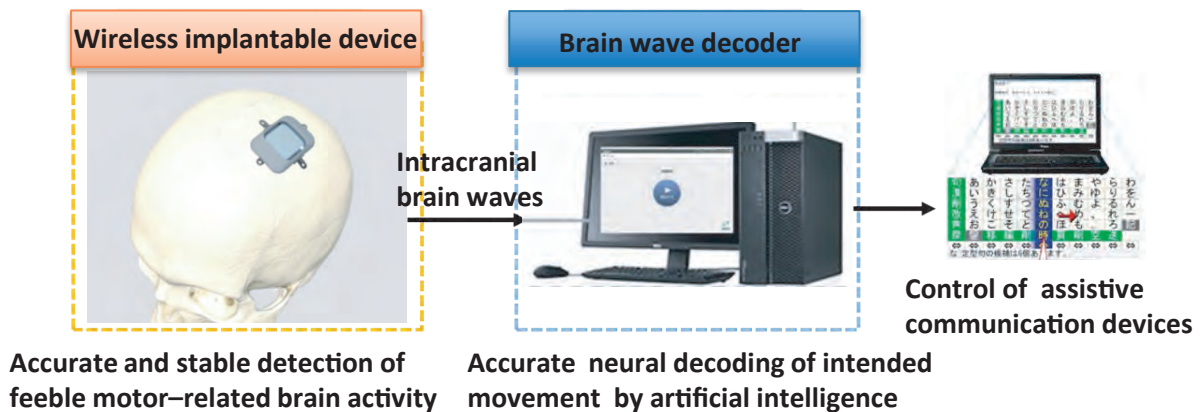
Restoration of Motor and Communication by Wireless Implantable Brain Machine Interfaces

Principal Investigator

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Project Outline



A brain-machine interface (BMI) is a technology used to read the contents of motions and communication from brain signals and to control robot arms and communication devices. This is expected as a technology to restore the impaired functions of disable people. In this project, we aim to perform a clinical trial of an implantable BMI device that records accurate brain waves using brain surface electrodes and to license it to a medical company.

In our previous clinical research using wired BMI system, a severely disabled patient with ALS successfully controlled a robot hand. We also developed an implantable wireless device, and completed non-clinical tests. We aim to start a pivotal clinical trial of the implantable wireless device in 2023.



We have developed the implantable device collaborating with Nihon Kohden Corporation and Murata Manufacturing Corporation. We established a start-up company, JiMED Co.Ltd. and now proceed technological transfer, aiming to commercialize the device .

Target diseases : Amyotrophic lateral sclerosis , muscular dystrophy , spinal cord injury

Patents : patented 5, published 1, applied 7, ; PCT 2, USA 4, EU 2, Japan 5

Technologically appealing points : innovative implantable device, Japan quality, high entry barrier, high added value, sustainable profitability