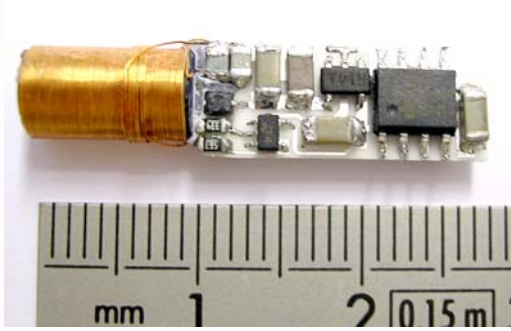
Biocompatible packaging of implanted sensor systems

Objective

Autonomous sensor systems for intracorporeal implantation allow continuous monitoring of physical parameters without disturbing the patient and causing measurement artefacts. For in vivo use, an extremely miniaturised, fully biocompatible package has to be developed. By incorporating the electronics in a fully biocompatible, flexible package, full-time implantation of such a flexible device would be well tolerated by the body, rendering it unnoticeable to the patient and improving comfort to a large extent.

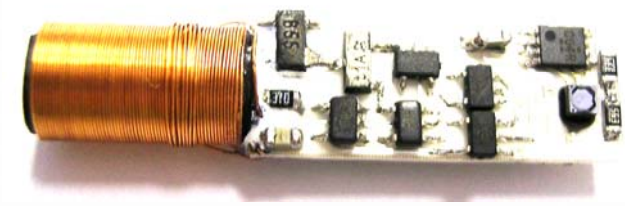
Partners involved:

- KULeuven
- QinetiQ
- Budapest University of Technology and Economics
- Heriot Watt University



Summary

- Selection of demos: *Pressure sensors, flex circuit*
- Packaging of test modules: *Parylene and/or silicone coating*
- Testing of packaged modules: *Electrical integrity of circuit / components; Thermal characterisation: film adhesion*
- Form the basis for more comprehensive study of biocompatible packaging



Offer to industry

- Generic packaging procedure for sensor systems
- Knowledge of packaging material properties

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Project status

Started January 2006