

Zarlink Semiconductor Healthy Aims a Framework VI Project Overview

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Presentation Overview

- **What is Healthy Aims?**
- **What and who it involves?**
- **What is Zarlink's involvement?**
- **What have we been developing?**

What is Healthy Aims?

- **€23M four year project with €16M combined funding from the EC and Switzerland**
- **Funded under the Sixth Framework**
- **Object to develop a number of intelligent medical implants and diagnostic systems**
- **Approaching the end of the final year**



Who is Involved?

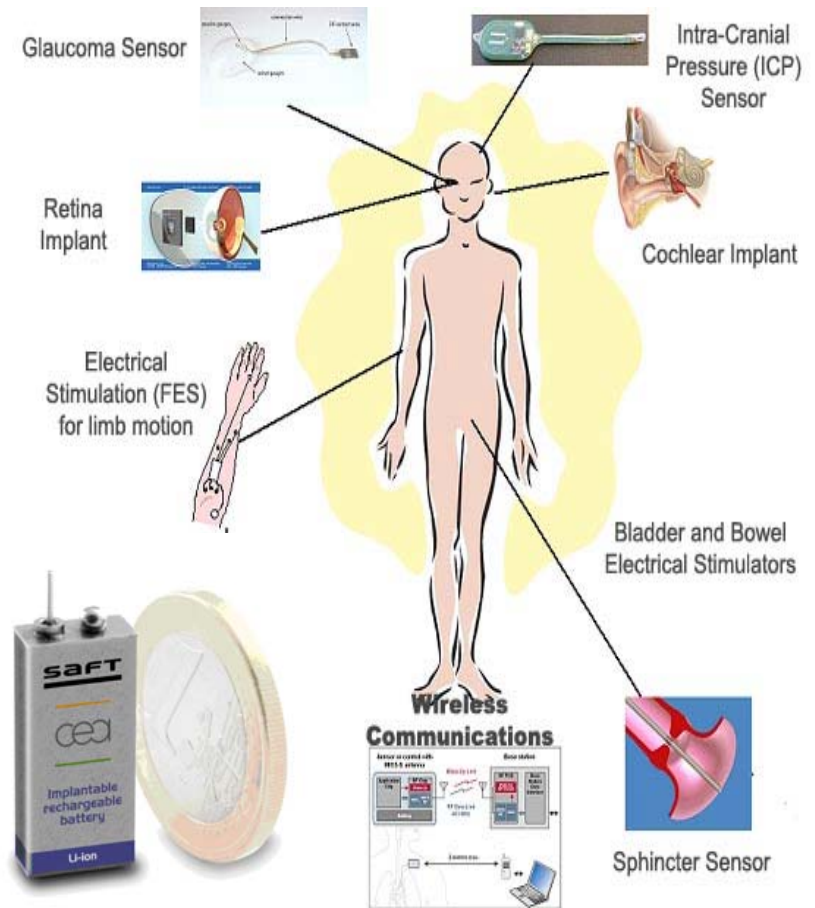
- The project has 26 partners from Industry, Academia and Clinical Groups
- Partners are from 7 EU countries



What's Being Developed?

- **Partners developing range of microsystems**

- **Energy sources**
- **Electrodes**
- **Sensors**
- **Biomaterials**
- **Communications**



What is Zarlink's Involvement?

- **Work package leader for communications**
 - Tasked with developing wireless communications to and from partner products
- **Settled on two technologies**
 - Medical Implant Communications Service 402 - 405MHz
 - Bluetooth 2.45GHz

What Have We developed?

**Audio Data
Transceiver**

BT



**Glaucoma Data
Transceiver**

BT



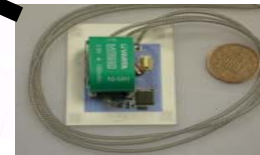
**Motion Sensor
Transceiver**

MICS

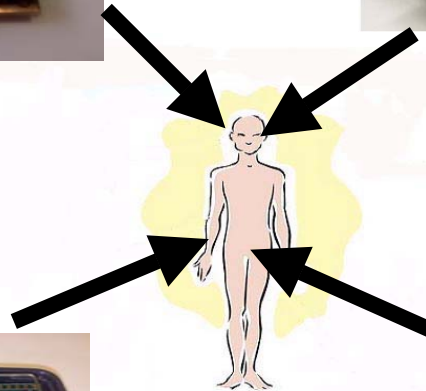


NES Transceiver

MICS

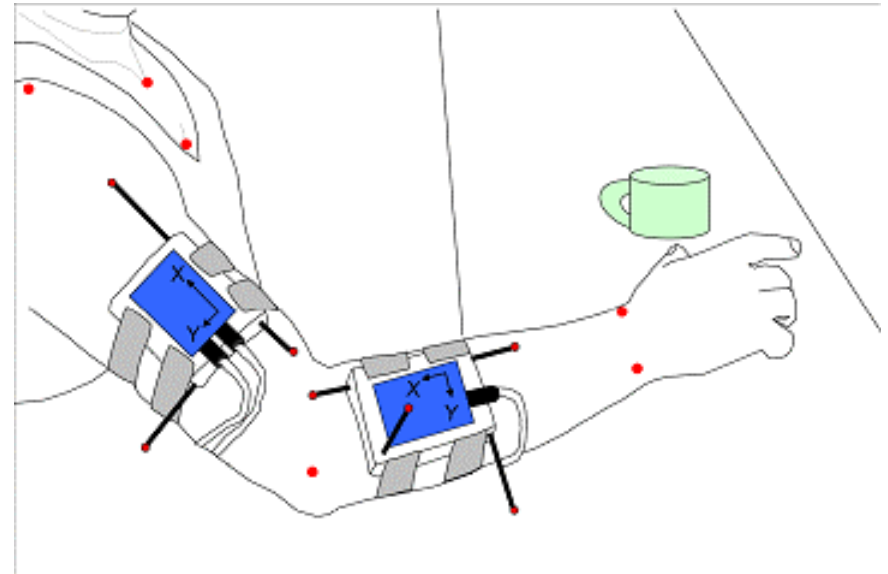


**ZL70101 Implant
Reference Design**



Zarlink's Current Focus

- **Working with UCL, Finetech Medical, Salisbury District Hospital on a demonstration system for a wireless 6 channel FES system**
- **Two applications**
 - Restore some hand grasp in stroke victims
 - Restore bladder control for spinal injury patients



Hand Grasp Application

- Motion sensor detects arm movement and signals to hip-worn base station



- Motion sensor



- Hip-worn base station signals implant to close hand



- Muscles or nerves stimulator

Bladder Control Application

- Hip-worn base station sends message to implant to stimulate bladder muscles



- Muscles or nerves stimulator

Presentation Review

- **Introduced Healthy Aims**
- **What and who it involves**
- **Reviewed Zarlink's involvement in developing wireless communication**
- **Brief overview of Zarlink's current project focus**

Zarlink Semiconductor Thank You



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