

CSEM Intended AAL Proposals

Meeting: Information day AAL

Date: 30th Jan 2006

Place: Charlemagne Building, Brüssel

Outline

- CSEM
- Biomedical Engineering
- AAL Proposals
- Project References

CSEM profile

CSEM figures

- Private retained-profit company with 70 shareholders
- 2004: revenue: 35 Mio €, employees: 270
- Mission: development and transfer of high-tech

CSEM strategic fields

- Microsystems and nanotechnology
- Low-power electronics
- Photonics and optoelectronics
- Personal information systems
- Portable biomedical devices



Biomedical engineering at CSEM

Sensing, classification and event detection

- Assistant living to elderly
- Medical diagnostic systems (pacemakers)



Continuous monitoring of human vital signs

- Artifact resistant (motion, light, environment)
- Multi-dimensional monitoring approach



Wearable electronics

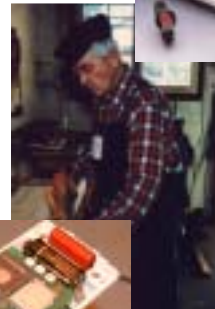
- Remote monitoring
- Intelligent embedded textile



Intended AAL proposals

Assist elderly with comfortable and reliable monitoring and diagnostic systems

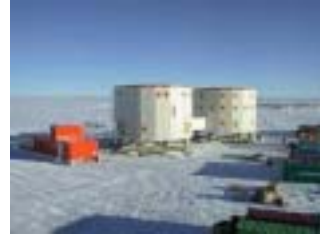
- Valorization CSEM's experience in the domain of portable biomedical devices (sensing, wireless comm, system conception)
- AAL proposal framework
 1. Sensing domain (STREP)
 2. System conception (IP)
- Targeted consortia
 - RTD partners in sensing
 - strong industrial partnership



Reference sensing: LTMS (ESA project)

Continuous and comfortable monitoring of physiological parameter

- Continuous and local processing of human vital signs, such as:
 1. ECG with dry electrodes
 2. Location independent SpO2
 3. Embedded respiration and activity monitoring
 4. Photoplethysmographic NIBP
 5. Body core temperature on thorax
- Wireless link to nearby base station



Reference system: MEDICATE (EU project)

Assist elderly in medicines taking and medication monitoring and control

- Programmable medication intake reminder and event data logger
- Medication container with locking of compartments
- Container identification
- Wireless communication with home base unit, connected to public phone network

Bluetooth chipset



compartments unit with memory chip



Thank you for your attention