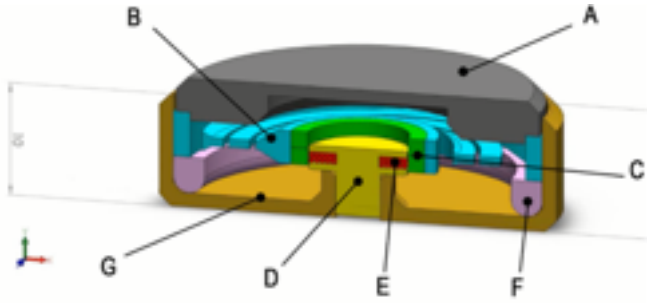
LIÈGE université
Interface Entreprises
Recherche & Innovation

Energy harvesting technology perpetual power supply IoT devices



The current trend is to provide a full autonomy to IoT device (sensors, …). Indeed, for the wireless systems, it is crucial to supplant the battery which leads to significant maintenance costs. This research field is known as *Energy Harvesting*.

Philippe Laurent, senior scientist at the Microsys Lab from the University of Liège, has developed a new system able to power electronic devices by using energy from the ambient environment (slow motion, vibrations).

The range of possible applications is very large:

- Possible adaptations of the microsystem to larger systems for energy harvesting (~W)
- Smartcity applications
- Transport and logistics
- Industry 4.0
- Smart building (remote control, switch)
- Health Monitoring
- Smart Wearable devices self-powered by walking

KEY ACHIEVEMENTS

- Size: < 10 cm^3
- Power provided: ~ few mW / cm^3
- Harvest energy from motion over a large frequency range (slow movements, vibrations, …)

KEY COMPETITIVE ADVANTAGES

- Eco-friendly and sustainable
- High efficiency
- Compact Technology: ideal for IoT and Industry 4.0
- High availability of power supplying
- Low Cost (thanks to maintenance cost saving)
- Can provide enough power to supply a micro sensor platform with wireless data sending

UPCOMING CHALLENGES

- Cost optimization for large manufacturing
- Optimization still possible to specific applications

PARTNERSHIP SOUGHT

- Research collaborations
- Licensing agreement

INTELLECTUAL PROPERTY

- EU Patent: EP2584683B1 (BE, GER, FR, UK)
- US Patent: US9653980B2

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