APPROXIM@CTION

Digital Infrastructure

Cutting battery usage with approximated computing for wireless IoT

Approximated computing for extremely low powered wireless sensors to extend their battery lifetime.

Low energy wireless sensors need to preserve energy to last normally 10 years in function. Approxim@action will deploy multiple and complementary approaches for reducing battery usage, such as adaptive frequency sampling, variable length sensing, more efficient transmission, improved data prediction techniques and approximation of computing algorithms, in order to produce

a new generation and possibly a new standard for ultra-low-power wireless digital things (sensors & actuators), thereby mitigating frequent battery replacements. New 'Things' based on this approach will be useful in IoT applications where battery-life is a major challenge.

➕ Competitive Advantages

- Multiple and complementary approaches of approximation for wireless battery-scarce IoT devices, to extend the life-time
- Significant reduction in energy consumption with consequent improvement in battery life of the sensor, reduced maintenance and data transmission costs

🎯 Target Markets

- Target Segment: Sensor manufacturers, Hardware manufacturers, Machinery manufacturers, Smart City System Integrators (i.e. IBM)
- Target Markets: Europe, with greater focus on Italy
- Companies focusing on Smart City Environmental management or Building automation, needing long life-time sensors (e.g. to be used in Proof of Concept or small trials)

⚙️ Status and Traction

- First pilot in Torino city
- With partners Reply, Politecnico di Milano, Universita' di Trento, University Paris SUD, IMEC

🎋 Road Map

2018

- Production and first release of Approxim@ction components (sensors, wireless node and data sink)

2019

- New devices developed with advanced image recognition and data prediction techniques
- Market development, including demonstrators, larger scale pilots and market communications

👥 Connect

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📍 Location

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