# Wi-fi smart thermostat for home energy saving.

## Summary

*A Spanish company, specialized in energy management, has developed a technology - a wi-fi smart thermostat for home energy saving. It is equipped with different sensors and an algorithm that learns from people's habits at home in order to rationalize energy costs and reduce environmental impact. The company is looking for commercial agreements with technical assistance.*

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|---|---|
| **Creation Date** | 09 May 2016 |
| **Last Update** | 18 May 2017 |
| **Expiration Date** | 22 November 2017 |
| **Reference** | TOES20160509003 |

## Details

### Description

This technology is focused on reducing home energy consumption through improving efficiency, which seems to be the only sustainable option nowadays.

Current thermostats installed at people's homes lack efficiency. Programmable thermostats offer a partial solution but can be very complex and difficult to use. Therefore in most cases are programmed incorrectly, thereby limiting considerably the energy savings they are able to offer.

This smart thermostat solves this problem by incorporating an innovative software that combined with different sensors (temperature, light, proximity and motion), automatically learns from people's lifestyle, adapting the home temperature. It creates a personalized schedule based on the temperature changes the users make. As a result , it knows at any time how warm the house should be without having to do anything. It is also able to differentiate between weekdays and week-ends for even bigger energy savings.

Main features of this technology are the following:

-Block/deblock option
-Calendar and schedule auto-Setup
-Sensors: Presence, temperature, humidity and light.
-Geolocation: It turns off the heating automatically when the user is not at home.
-Manual temperature adjustment
-Temperature ranges: 5-40 °C / 32-140 °F
-Automatic night turn-off
-Takes into account external weather conditions
-App for remote control.
-Fully compatible with PC, Mac, tablet or smartphone
-Email based customer alerts
-Languages: english , german , french and spanish
-Automatic switch from heat to air conditioning

-Individual schedule 7 days a week with 4 different options
-+/- 3 degrees selection
-Real-time devise control
-Automatic updates
-Touch LCD screen with different screensavers
-Web access or through an app on smartphone
-Private, secure and encrypted communications
-It is compatible with 95 % of all heating systems .

This is a suitable solution for any kind of home and small and medium companies.

The company is looking for international partners within the energy management sector in order to reach commercial agreements with technical assistance.

**Advantages and Innovations**

-It saves up to 30% of the energy bill by controlling and monitoring energy consumption.
-It detects whether it is day or night, or if any change occurs in the intensity of light. Based on that, it optimizes the heating system.
-Presence function: Sensor that allows significant energy savings by automatically adjusting the temperature to avoid over heating or cooling an empty home.
-Cooling function: Optimizes the usage of air-conditioning by automatically turning it off a few minutes early but keeping the fan running. The air stays cool whilst costs are significantly reduced.
-History function: Monitors heating and air-conditioning usage and costs. This information will allow users to understand when most of the costs are produced.
-Full remote control function: Allows real time management of the thermostat anytime, anyplace, anywhere through any browser or a free app available for any type of smartphone.
-Real time function: Calculates the average time that a home takes to heat up or cool down. This function significantly reduces energy costs as it optimizes the time that the heating or air-conditioning needs to be turned on.
-Saving function: Shows when users are making savings against the average heat and air-conditioning costs.
-Vacations function: When users are on holiday, the thermostat will suspend what it has learnt. Users will be able to define which date they will return and can even change that date from their Smartphone or browser if they decide to return earlier.

**Stage of Development**

Already on the market

**IPR Status**

Patent(s) applied for but not yet granted

**Comment Regarding IPR status**

PCT applied

**Profile Origin**

Private (in-house) research

## Keywords

**Technology**

| | |
|---|---|
| 02006004 | Installations related to construction (energy, lighting, …) |

| | |
|---|---|
| 04 | ENERGY |

**Market**

| | |
|---|---|
| 03 | OTHER ELECTRONICS RELATED |
| 08002001 | Energy management |

**NACE**

| | |
|---|---|
| F.43.2.2 | Plumbing, heat and air conditioning installation |

## Network Contact

**Issuing Partner**

ASTER - SOCIETA CONSORTILE PER AZIONI

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## Open for EOI : Yes

## Dissemination

**Send to Sector Group**

ICT Industry and Services

## Client

**Type and Size of Organisation Behind the Profile**

Industry SME 11-49

**Year Established**

0

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English
Spanish

**Client Country**

Spain

## Partner Sought

**Type and Role of Partner Sought**

- Type of partner sought:
Energy management technologies integrators.

- Specific area of activity of the partner:
Home energy management.

- Task to be performed:
To integrate this technology in the company solutions portfolio under commercial agreement with technical assistance.

**Type of Partnership Considered**

Commercial agreement with technical assistance

## Attachments

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# A Spanish research centre offers a non- destructive analysis of objects from different nature using an X-ray micro-computed tomography technical platform and seeks technical, research, and services agreements.

## Summary

*A Spanish research centre, with activity in the field of human evolution, offers a non- destructive analysis of objects from different nature using an X-ray micro-computed tomography technical platform and seeks technical, research, and services agreements.*

| | |
|---|---|
| **Creation Date** | 11 October 2017 |
| **Last Update** | 24 October 2017 |
| **Expiration Date** | 24 October 2018 |
| **Reference** | TOES20171011002 |

## Details

### Description

The Spanish research centre, belongs to the national network of Unique Scientific & Technical Infrastructures (ICTS). It is open to scientific and technological use by the national and international scientific and technological community. Its research activities are mainly focus on human evolution, and include collaborative projects at excavations and deposits worldwide.

The centre has developed a system of quality management based on ISO 9001 standards and, in the case of testing laboratories, also on the ISO / IEC 17025 standards, as a tool for creating value for the organization and for users of the infrastructure.

The computed tomography technique offered is an X-ray imaging technique that allows scanning, exploration, and 3D modelling of samples. It is a non-destructive technique whose fundamental is the virtual reconstruction of sections of an object from the radiographs acquired along 360º.

The analysis of the output images provides qualitative and quantitative results in terms of density profile, defects inspections, particles dispersion, porosity, volume, dimensional control, etc.

The technique shows a wide field of application, being among others: materials science, biology, medicine, geology, archaeology, cultural heritage, etc.

The micro-computed tomography equipment scans samples with a maximum height of 42cm, a maximum diameter of 20cm, and a maximum weight of 10 Kg. It hosts two different tubes: the microfocus (240 KV, resolution = 1 micron) and the nanofocus (180KV, resolution = 0.5

microns).

With this technology, the user can get: the digital scanning in 2D and 3D of the part, advice on image analysis, digital image analysis, use, by the client, of image analysis software to analyse their data, etc.

The Spanish public institution is seeking for researchers, universities, research centers, and companies interested in using their facilities as well as to establish agreements and research projects with them.

**Advantages and Innovations**

The main advantage of the micro-computed tomography technique is its non-destructive nature, so that, you can analyse the piece, getting both, visual and numerical (quantitative) information of all its volume, without breaking it.

This aspect is very important in any research field, since you preserve the piece intact without having to destroy it.

**Stage of Development**

Already on the market

**IPR Status**

Secret Know-how

**Profile Origin**

Private (in-house) research

## Keywords

**Technology**

| | |
|---|---|
| 01002002 | 3D printing |
| 01003012 | Imaging, Image Processing, Pattern Recognition |
| 01005001 | Cultural Heritage |
| 02001001 | 3D printing |

**Market**

| | |
|---|---|
| 02004004 | Other scanning related (incl. image processing, ...) |
| 05002001 | X-rays |
| 05002002 | CAT scanning |
| 08002003 | Process control equipment and systems |

**NACE**

| | |
|---|---|
| M.72.2.0 | Research and experimental development on social sciences and humanities |

## Network Contact

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## Open for EOI : Yes

## Client

**Type and Size of Organisation Behind the Profile**

R&D Institution

**Year Established**

2009

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English
Spanish

**Client Country**

Spain

## Partner Sought

**Type and Role of Partner Sought**

The centre is looking for partners in the scientific and technological community, both academic and industry, that could be interested in the use of the micro-computed tomography technique to the analysis of their samples.

- Type: academic, research organisation, industries.

- Activity: research, industry, quality control, archaeology, cultural heritage, geology, biology, and medicine

- For technical cooperation and service agreements, the partner sought must be interested in the use of the micro-computed tomography technique to analyze their samples.
For research cooperation agreement, the centre seeks projects in which this technology can be applied.

**Type and Size of Partner Sought**

SME 11-50,University,Inventor,R&D Institution,SME <10,>500 MNE,251-500,SME 51-250,>500

**Type of Partnership Considered**

Services agreement
Technical cooperation agreement
Research cooperation agreement

## Attachments

Technology Request

# A web and mobile apps developer from Poland is looking for partners experienced in camera behaviour detection technologies to improve the localisation and measuring system for the fast-moving consumer goods industry.

## Summary

*A Polish company dealing with development of web and mobile applications is currently working on a localisation and measuring system for the fast-moving consumer goods (FMCG) industry and would like to find partners experienced in camera behaviour detection technologies, capable of improving the offered system. Technical cooperation agreement considered.*

| | |
|---|---|
| **Creation Date** | 27 June 2017 |
| **Last Update** | 03 July 2017 |
| **Expiration Date** | 03 July 2018 |
| **Reference** | TRPL20170627001 |

## Details

### Description

A Polish web and mobile apps development company established in 2017, specialised in creating software and outsourcing of IT assets.

The company deals with design, creation and implementation of web systems and mobile applications, including comprehensive localisation and measuring systems for people and objects activity in particular area. The company cooperates with top web and mobile developers and offers consulting services to companies looking for rapid business development. Currently, they are working on a project focused on using a location system in the fast-moving consumer goods (FMCG) industry by large manufacturers and shop owners.

The project is based on a comprehensive system consisting of the following elements:
• hardware infrastructure consisting of a network of receivers and transmitters (Beacons)
• SaaS platform (software as a service) used as a large administrative panel (analytical big data)
• Client mobile application and online dashboard

The offered solutions for the fast-moving consumer goods (FMCG) industry are supported by the IBeacon technology, bluetooth enabled devices used for location and dedicated uploads information. The offered solutions also employ camera devices as well as human behavior and activity recognition and detection systems.

The company is interested in improving the currently developed solutions in localisation and measuring of people and objects activity in particular areas with the support of partners having

considerable experience in camera behaviour detection. Technical cooperation agreement is considered.

**Technical Specification or Expertise Sought**

The offered solutions are based on the following technologies: Swift and Objective-C for iOS, Java for Android 4.4.4, AngularJS, Ember.js, React.js, JavaScript , HTML 5, CSS, AngularJS, Bootstrap, Node.js, Laravel – for frontend, and PHP technology (5.5 and later) for backend.

Partners expertise sought: camera behaviour detection technologies

**Stage of Development**

Already on the market

## Keywords

**Technology**

| | |
|---|---|
| 01003008 | Data Processing / Data Interchange, Middleware |

**Market**

| | |
|---|---|
| 01004008 | Other data communications |
| 08006001 | Process control and logistics |

**NACE**

| | |
|---|---|
| J.63.9.9 | Other information service activities n.e.c. |

## Network Contact

**Issuing Partner**

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## Open for EOI : Yes

## Dissemination

**Send to Sector Group**

ICT Industry and Services

## Client

**Type and Size of Organisation Behind the Profile**

Industry SME <= 10

**Year Established**

2017

**Turnover**

<1M

**Already Engaged in Trans-National Cooperation**

Yes

**Experience Comments**

Scrum, IPMA, Prince2 certification

**Languages Spoken**

English
Polish

**Client Country**

Poland

## Partner Sought

**Type and Role of Partner Sought**

The company is looking for partners capable of improving the described localisation and measuring systems for people and object activity in particular areas. Companies with experience in camera behaviour detection technologies are particularly welcome.

Technical cooperation agreement is considered.

**Type and Size of Partner Sought**

SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

**Type of Partnership Considered**

Technical cooperation agreement

## Attachments