

Dynamic evaluation of the street lighting efficiency

Summary

Profile type	Company's country	POD reference
Technology offer	Spain	TOES20230727011
Profile status	Type of partnership	Targeted countries
PUBLISHED	Commercial agreement with technical assistance Research and development cooperation agreement	• World
Contact Person	Term of validity	Last update
Rita ELSTE - TOMSONE	27 Jul 2023 26 Jul 2024	27 Jul 2023

General Information

Short summary

A Spanish SME has developed a technology that allows to measure photometric properties on public streets and roads in motion, in an accurate, quick, and effective way, at the road speed and without need of interrupting the traffic. The system is applicable to urban areas, crossings, and tunnels.

Full description

This Spanish SME develops and provides technological services of mobile survey of different elements of the transport infrastructure system (mainly traffic signs, pavement markings and street lighting among others).

The company has capacities and technology know-how allow to adapt their services to technical specifications and requirements of each project thus always providing outcomes of high technology level combined with outstanding quality and productivity.

The company has a vast experience in the survey of different types of assets, roads of all different categories (motorways, interurban, urban...), in different countries, that it gives a wide vision of the different needs and requirements for each project, aligning the solutions to them to provide an optimum solution.

The latest technologies developed allows to perform an accurate and repetitive measurement of different assets of

the road infrastructure transport system.

There are traditional or static measurement methods (with a lux meter manually and with traffic cuts during measurements) and the dynamic measurement system, through an instrumented vehicle without interrupting traffic. This system allows to know the efficiency and potential energy saving of the facility, to prioritize actuations and optimize investments, to verify consumption and lighting levels previous and after actuations and to optimize maintenance costs by selecting the most appropriate technologies according to the current legislations.

The Spanish company uses a vehicle instrumented with state-of-the-art technology for the measurement in motion of the most relevant photometric values, including a highly accurate geo-tagging of the acquired measurements. From these data, it can assess the performance of the facilities and to create highly accurate geo-tagged inventories.

The partnerships sought are whit entities that require this technology. The main interest of the company is to stablish agreements regarding the mentioned technology and in some other fields to be able to further develop the involved technologies in each of the cases. This may also include opportunities to collaborate within European Research funded projects.

Advantages and innovations

A rigorous evaluation of the energy efficiency of public lighting involves two major aspects: on the one hand, the electrical energy consumed and, on the other, the light energy that is generated. As for the electrical energy consumed, there are advanced consumption monitoring systems, while measuring existing light in the streets in a practical way seems to be an aspect that needs to be resolved in many cases.

This technology's services are based on a proprietary dynamic system for the assessment and inventory of the public lighting facilities. This dynamic system allows dynamic measures:

- In motion at the road speed
- Without interrupting traffic
- Measurement of luminance and illuminance with state-of-the-art sensors
- Measurement of real energy efficiency according to European Standard EN 13201 and Spanish

Standard RD 1980/2008

- Highly accurate GPS (Global Positioning System) positioning
- Automatic identification and inventory of luminaries
- Creation of photometric maps.

This technology allows an assessment and analysis of public lighting facilities:

- Highly accurate measurement of photometric levels (luminance, illuminance, uniformity...) by means of an instrumented vehicle.
- Assessment according to European Standard EN 13201 and Spanish Standard RD 1980/2008
- Public lightning energy audits
- Consultancy and elaboration of improvement plans, prioritizing the actuations according to the cost-effectiveness of the investments.
- Simultaneous generation of high-quality inventories

Also allows a plain and complete information management:

- Photometric and energy efficiency maps
- Geo-tagged position of luminaries and control boxes
- Positioning of luminaries, height, and relative distances
- Lamp type: LED, High Pressure Sodium (HPS), Metal Halide (MH), etc.
- Photometric levels (luminance and illuminance)
- Visualization software provided with the results

Technical specification or expertise sought

Stage of development

Already on the market

Sustainable Development goals

- **Goal 13: Climate Action**
- **Goal 11: Sustainable Cities and Communities**
- **Goal 9: Industry, Innovation and Infrastructure**

IPR Status

Secret know-how

Partner Sought

Expected role of the partner

Type of partner: Academic, research organisation, SMEs, big companies, other (public administrations)

Role of the partner: The main interest of the company is to stablish agreements regarding the mentioned technology and in some other fields to be able to further develop the involved technologies in each of the cases. This may also include opportunities to collaborate within European Research funded projects.

Type of partnership

Commercial agreement with technical assistance**Research and development cooperation agreement**

Type and size of the partner

- **University**
- **SME 50 - 249**
- **SME <=10**
- **Big company**
- **SME 11-49**
- **Other**
- **R&D Institution**

Dissemination

Technology keywords

- **02009012 - Automotive engineering**
- **02008005 - Road Transport**
- **02009009 - Sensors for cars and transport**
- **02008006 - Traffic Engineering / Control Systems**
- **02009004 - Road Vehicles**

Market keywords

- **09001005 - Motor vehicles, transportation equipment and parts**



Targeted countries

- **World**

Sector groups involved

