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INTELLIGENT AND SUSTAINABLE URBAN LIGHTING SYSTEM

PATENTED TECHNOLOGY

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ABSTRACT

Researchers of the University of Alicante have developed a system that allows to control the urban lighting of a city intelligently, reducing its energy consumption.

The technology uses the existing infrastructure and controls the level of lighting required based on the human presence in the area. This system is scalable and can be implemented in any urban area.

The research group is looking for companies acquiring this invention for: licence agreement or technical cooperation.

ADVANTAGES AND INNOVATIVE ASPECTS

• The system allows **advanced video and digital image analysis** based on remote processing that ensures greater security over the real presence of people in the area. This method is more effective than detection by infrared sensors.

• The system obtains a **considerable reduction in energy consumption** by decreasing lighting when there is no human presence in the area, which occurs during most of the night.

• The system does **not require an added infrastructure**, since it takes advantage of the image capture systems already existing on public roads to analyze the presence of people.

• The **distributed processing of images** is an advantage because it allows covering the volume of analysis necessary to control a wide area.

• The system is **highly scalable** and can be used both in confined spaces and in large cities.

• The system allows **the integration of additional services** under the same platform.

INNOVATIVE ASPECTS

The main innovation of the system is that it combines different elements of the Internet of Things (IoT) paradigm and Cloud Computing for the design of a highly scalable and efficient intelligent lighting system.

The system integrates existing image or video acquisition devices on public roads with remote computing platforms Cloudlet and Cloud Computing that assist the necessary advanced processing.

The computational methods developed take advantage of this infrastructure to distribute the processing among acquisition devices, Cloudlet platforms and remote systems through the application of Mobile Cloud Computing.

MARKET APPLICATIONS

The technology can be applied in this cases.

- Information Technology Sector.
- Installation and maintenance services of urban lighting networks.
- Local councils and public entities.
- Enterprises, shopping centers, health centers and entities that manage large spaces that have a network of luminaires.

COLLABORATION SOUGHT

Researchers are looking for companies acquiring the technology for implementation in their products or services. It is possible to reach license agreements.