

smart
city
expo
WORLD CONGRESS

Smart society for innovative
and sustainable cities

Gran Via Venue · 29 November - 2 December 2011



World Smart Cities Awards

PROYECTO **POLUX**

REF. IPT-2011-1675-020000

**Dispositivo fotométrico
móvil para iluminación vial**

ilimit...

snelloptics

fibercom



aido
OPTICA COLOR IMAGEN
Instituto tecnológico



STREET LIGHTING

public service regulated by legislation, imposing limits in lighting levels, uniformity, glare, tone.



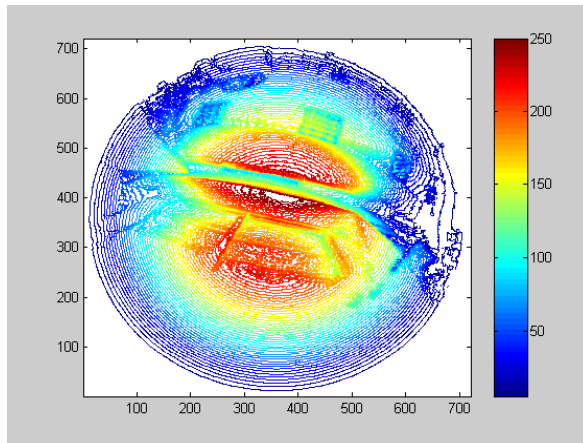
Maintenance provides quality in the service and costs reduction: mainly components substitution and energy consumption



LIGHTING AUDITS

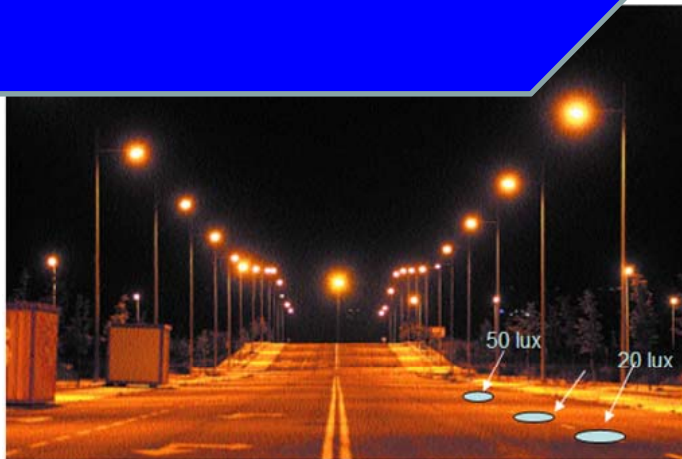


AVAILABLE TECHNOLOGIES

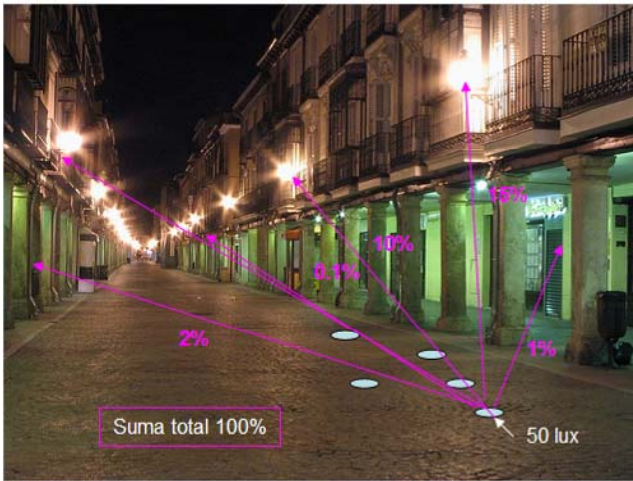
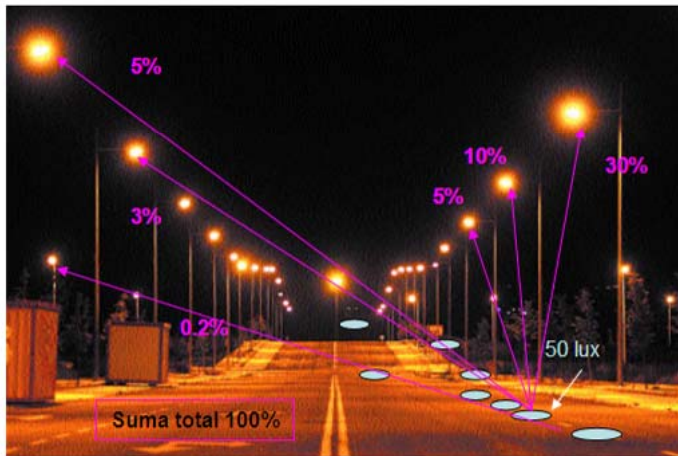


- A sensor (alone) for the dynamic measurement of light, both quantity and distribution.
- Tested in the lab
- Patent filed

Problem solved

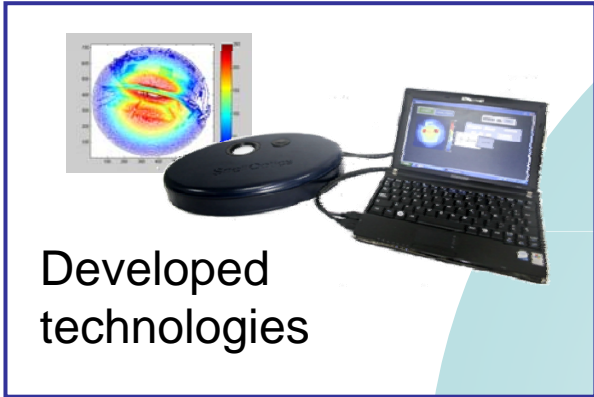


Measurement results total value on the surface



Outcome measures, total value on the surface and determining the contribution of all light sources involved

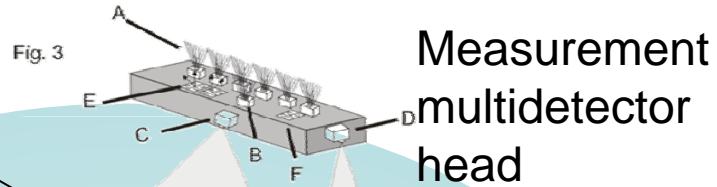
INTEGRATION IN POLUX PROJECT



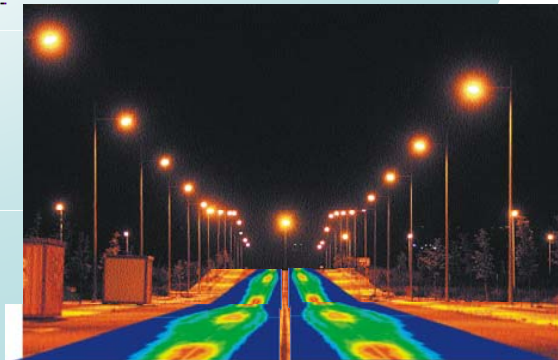
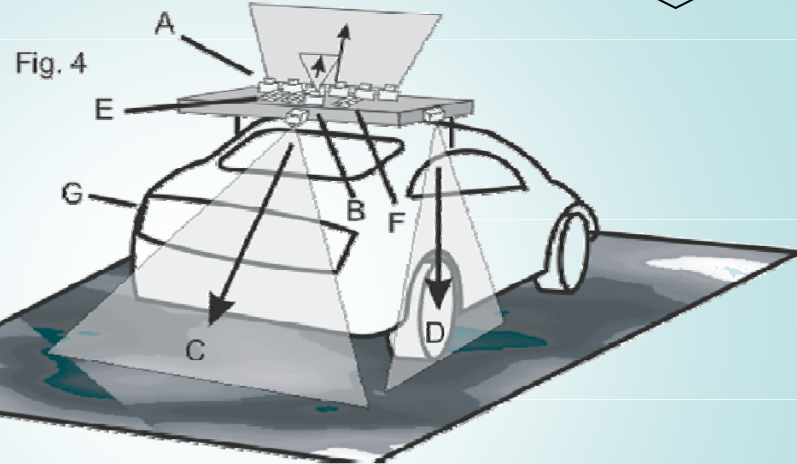
On street test



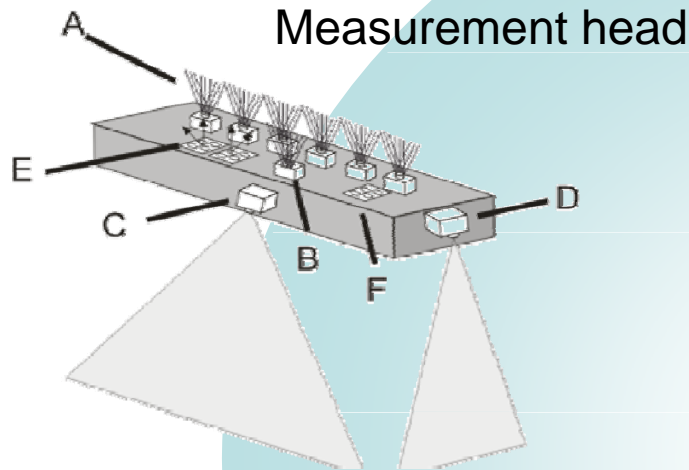
Data link and communication



On board device



ON BOARD TECHNOLOGIES

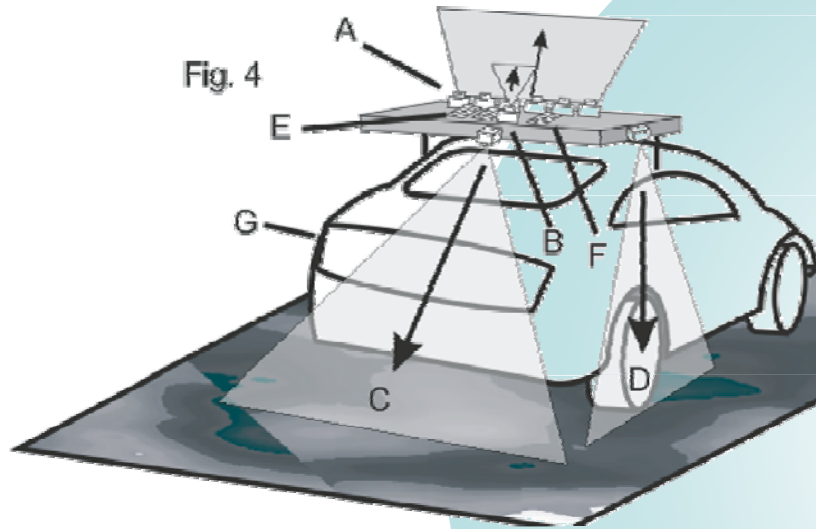


- A) Individuals measurements units**
- B) global illumination device**
- C) View unit of the street**
- D) Velocity sensor**
- E) Geo-reference**

- Use of the correct number of sensor to measure the full scene as required by legislation
- Incorporation of a geo-reference in the measurement head
- Velocity sensor
- Image fusion to overlap the real public street and the virtual representation of the measurements done

ON BOARD TECHNOLOGIES

On board



- A) Measurement head**
- B) Global illumination measurement device**
- C) View Unit of the street**
- D) Velocity Sensor**
- E) Geo-reference**
- G) Car-fixing**
- F) Data link**

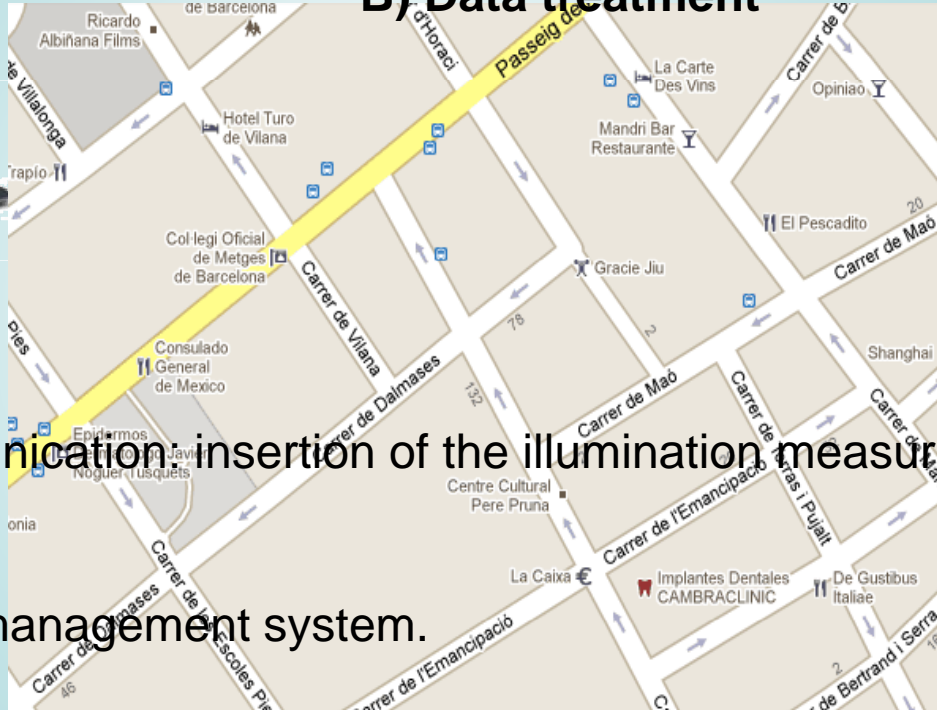
- Vehicle adaptation to include the equipment needed for the street lighting measurements
- Easy anchorage of the measurement head
- Positioning sensors and auxiliary components
- Data link, processing and visualization unit

ON BOARD TECHNOLOGIES



GIS

A) Geo-referenced sensors
B) Data treatment



- Data processing and communication: insertion of the illumination measurement results in the city map.
- Link with the street lighting management system.
- Fast display of measurement results, diagnosis of the condition of the light installation

LIGHTING AUDITS



The project the first stage of a future ESE (Energetic Services Enterprise)

At this stage the partners are involved in the street light measurement equipment development



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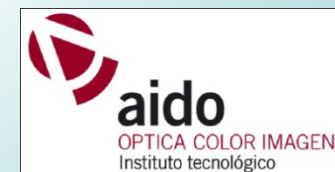
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DE CIENCIA
E INNOVACIÓN

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