OPTICAL MEASUREMENTS IN CITIZEN PROJECTS

Smartphones with attachable mini-spectrometers make it possible to map current environmental data of entire countries with the help of thousands of citizens.
FINE DUST PARTICLES get into the air from different sources.

CENTRAL DATA EVALUATION
evaluation concerning the amount, particle size, and composition

MAPPED DATA THAT IS ACCURATE IN TIME AND LOCATION
example: the Netherlands

POLLUTION
very strong very low
FOREST FIRE SURVEILLANCE

Automated optical sensor systems monitor large forest areas day and night for fires.

EXAMPLE
surveillance of the Teltow-Fläming county, near Berlin, Germany

Coverage of an area of 310,000 ha with 10 SYSTEMS on fire watchtowers
Automated optical sensor systems monitor large forest areas day and night for fires. The optical sensor system registers smoke development automatically in the visible and infrared spectral range. The camera turns itself in stages on its own axis over 6 minutes.

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Area being monitored

Optical sensor system

Camera

Angle of vision
60° per minute

Coverage of an area
with
310,000 ha

10 systems

on fire watchtowers

Optics for night-time operation

Optics for day-time operation

FOREST FIRE ALARM CONTROL CENTER
receives data and images if a fire is detected

15 km
92 km
55 km
Efficient sorting facilities are used to recover many materials in their raw form from heaps of domestic waste. Together with fast image processing software, multispectral cameras capture within a split second what should be placed in which raw material container.
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