



TYPE OF RESULT

New technology

New product

New service

New knowledge or skill



COMMERCIAL MATURITY LEVEL

Conceptual idea

Proof of concept (design)

Validated in a controlled environment

Validated in a real environment

Successfully implanted



PROTECTION LEVEL

Non- applicable

Patent

Software

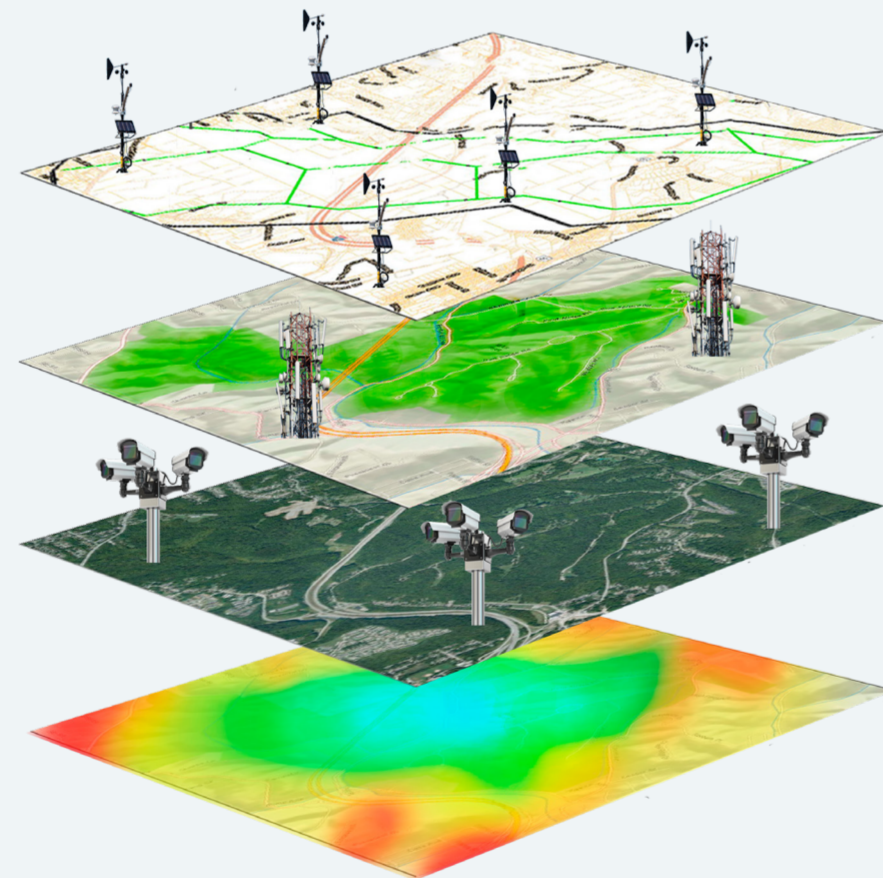
Know - how

Utility model

Technology description

ViMetRi is an information system that integrates data coming from heterogeneous information sources. It allows a detailed monitoring of meteorological events at local, island and regional level. This system is composed of three subsystems:

- A sensorization subsystem, which gathers information coming from weather stations available, irrespective of their source (for example: AEMET- Spanish State Meteorological Agency; Government of the Canary Islands; local corporations or, even, private sources). This subsystem also collects information from radio link networks of microwave frequency range (from both ground and satellite stations) and images obtained simultaneously from different video surveillance cameras.



- A subsystem for information processing that applies artificial intelligence techniques.
- A centralised access panel to the processed information, which goes through the web, monitoring meteorological events locally, in order to avoid risks and to improve coordination of staff working in emergency management.

Thanks to the capacity of the ViMetRi system for taking advantage of the different sources of information (many of them from instrumentation already being used on the ground), a detailed monitoring of precipitation and other meteorological variables is possible, due to both

the spatial precision level on the covered area and the immediate surveillance.

This technology offer consists of the following possibilities: know-how transferring or services for the already installed system.

Fields of application

ViMetRi system may be very useful in all those areas where information about accurate and immediate meteorological events is highly valued, whether in normal conditions or adverse phenomena that may happen, for both protecting goods and safety and well-being of people.

Particularly, its applicability is especially important for some sectors and activities such as the following:

- Safety and emergency services.
- Environment and nature protection services.
- Tourism sector, particularly leisure and outdoor recreational activities.
- Culture and sports sector, especially for outdoor events organisation.
- Primary sector, particularly for agriculture and farming.

Market opportunity / needs

- For safety and emergency public services and for those services related to environment and nature protection, an early alert solution is vital in order to warn and spread alarms and accurate meteorological and/or hydrological hazard maps with information in real time.
- Tourism sector may also experience a significant impact not only in financial terms, but also in terms of tourists' safety and their experience in destination, since this system contributes to make accurate predictions, especially when organising and carrying out outdoor activities.
- Cultural and sport sector also needs very accurate meteorological predictions for organising and carrying out outdoor activities.
- Primary sector is particularly affected by meteorological warnings; because of this, this sector needs accurate information available for planning and avoiding problems caused by such events. For example, this information may be very useful during sowing and harvesting time (for agriculture) or during herding (farming).

Besides all the needs that current market is demanding, there are more potential sectors which may be benefited from the added value of

ViMetRi system:

- Telecommunication antennas: Providers of this type of service may extract meteorological data about the state of their antennas for monitoring and better maintenance.
- Domotic control systems installed in buildings and houses may also benefit from using ViMetRi System, since such devices may be automated for energy efficiency improvement using for such task all the information provided by ViMetRi about outdoor atmospheric conditions that are obtained from video surveillance cameras, which adds an extra functionality to these security devices.

Competitive advantage and innovative aspects

Unlike meteorological information systems that make predictions about large areas using information from few stations located in different places, ViMetRi system integrates heterogeneous information sources, taking advantage of the already installed ground infrastructure, which allows to improve the information quality.

There are similar solutions to ViMetRi system, but they are not proprietary solutions and, usually, they do not integrate information layers based on images from video cameras, radio links, etc.

This is a flexible system that can integrate different surveillance systems such as weather stations, satellite networks or video surveillance systems previously installed, conferring a high adaptability and scalability capacity to this system.

Resources needed to be implemented

Currently, there is a prototype available but the number of sensorization units is expandable; therefore, adding alternative data networks would improve the amount of available information.

Depending on the type of utility and desired level of implementation, the following resources or access to such resources would be needed, (when networks are already rolled out):

- Access to proprietary weather stations (access to many of these stations is usually free or require an agreement with owners).
- Access to a telecommunication network or

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availability of own radio links. Signal quality data access permits, rolling out a WiMAX network or parabolic satellite television antennas would be necessary.

- Access to video surveillance cameras or to own camera network.
- Computer equipment for data processing and calculation of the events.

Related equipment

- Servers and storage devices.
- Real time access to data coming from telecommunication radio links.
- Own video surveillance cameras.
- Real time access to own weather stations.

Application references

A prototype in pre-exploitation phase is available via the web, access to such website requires previous agreement with the ULPGC (University of Las Palmas de Gran Canaria).



Invention title Method for solar radiation estimation by grouping equipment outdoors.
File number ES2678745
Priority date 15.02.2017
Status Granted
Country Spain

Invention title Method for measuring environment temperature based on external devices with functioning device temperature mediators.
File number ES2678668
Priority date 15.02.2017
Status Granted
Country Spain