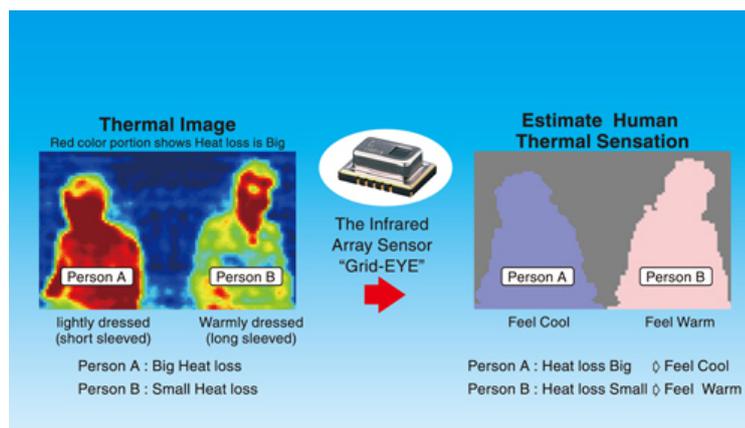


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Panasonic Starts to Deliver Thermal Sensing Solutions Using the Infrared Array Sensor "Grid-EYE"



Thermal Sensation Solutions Using the Infrared Array Sensor "Grid-EYE"
 Panasonic Corporation March 2016

Delivering thermal sensing solutions using IR array sensors is started. Since it enable high-precision and contactless thermal sensing they can be used in air conditioning, nursing and monitoring.

Osaka, Japan-Panasonic Corporation today announced that it has developed a thermal sensation estimation method* using the infrared array sensor Grid-EYE. Based on the results of estimations, the company has started to deliver high-precision thermal sensing solutions that recognize thermal comfort for people.

The thermal sensation estimation method* is a unique technology that recognizes the human sensations of hot and cold by calculating heat loss based on the difference between human surface temperature and ambient temperature. The thermal sensing solutions Panasonic provides are a super-resolution algorithm using Grid-EYE, an infrared array sensor, to measure the temperature distribution in detail and detect objects, thereby achieving air conditioning suitable for sensed temperature by combining the obtained data and thermal sensation estimation method*. In addition, Panasonic has developed unique software that maximizes performance and offer it in solutions for various applications.

When used for air conditioning for homes, offices and vehicles, the solutions help improve both energy conservation and comfort. Going forward, Panasonic will improve the algorithm and introduce it in fields requiring safety, such as nursing and monitoring, which require detection of the state of a person lying in bed, and diagnosing anomalies of facilities, which requires detection of heat generated as a result of facility troubles.

This solution has the following features:

1. With the thermal sensation estimation method* based on the calculation of heat loss using Grid-EYE, the solutions recognize the human sensations of hot and cold, thereby achieving air conditioning suitable for the temperature perceived by each person, thus helping to improve energy conservation and comfort.
2. A super-resolution algorithm, combined with Grid-EYE, measures the temperature distribution in detail without contact and detects the human body and objects. It will enable more sophisticated systems to be developed.
3. Unique software for maximizing performance is provided together with Grid-EYE, thus shortening the customer's development period by offering optimum solutions for the customer's purpose.

*Developed in collaborative work with Professor Hiroko Kubo, Faculty of Human Life and Environment, Nara Women's University.

The solution will be effective in the following applications.

- Air conditioning for homes and vehicles;
- Air conditioning and detecting the flow lines for Home Energy Management Systems and Building Energy Management Systems
- Detecting a person in nursing and monitoring applications;
- Electrical appliances such as air conditioning and microwave ovens
- Detecting a person for devices in offices (combined machines) or digital signage;
- Diagnosing abnormalities in facility devices, servers, datacenters, etc.

About Panasonic

Panasonic Corporation is a worldwide leader in the development of diverse electronics technologies and solutions for customers in the consumer electronics, housing, automotive, enterprise solutions and device industries. Since its founding in 1918, the company has expanded globally and now operates 468 subsidiaries and 94 associated companies worldwide, recording consolidated net sales of 7.715 trillion yen for the year ended March 31, 2015. Committed to pursuing new value through innovation across divisional lines, the company uses its technologies to create a better life and a better world for its customers. To learn more about Panasonic:
<http://www.panasonic.com/global>

Media Contacts:

Public Relations Department

Panasonic Corporation
Tel: +81-(0)3-3574-5664 Fax: +81-(0)3-3574-5699
Panasonic News Bureau
Tel: +81-(0)3-3542-6205 Fax: +81-(0)3-3542-9018

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