

September 3rd, 2019  
 NEXTY Electronics Corporation

Eliminating Heatstroke! Preventing Heatstroke with IoT

~ Using real-time data to visualize the risk of heatstroke ~

NEXTY Electronics Corporation (President & Representative Director: Atsushi Aoki, Headquarters: Minato-ku, Tokyo; hereinafter referred to as "NEXTY Electronics") has developed a new "Heatstroke Guard System" to identify and manage the risk of heatstroke. The system will go on sale during the summer of 2020.

The system visualizes WBGT values\*<sup>1</sup>, an index of heat recommended by the Ministry of Health, Labour and Welfare to identify the risk of heatstroke, in order to reduce the risk of heatstroke. A user can easily check the real-time WBGT values of remote locations where sensors have been installed by smartphone, tablet, or other device. The system can also automatically send warning e-mails if the WBGT value exceeds a certain level.

Details

[System Features]

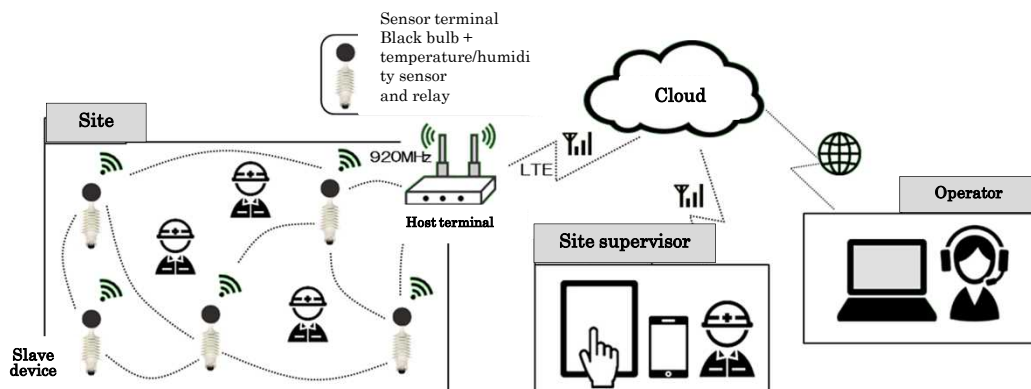
Recently, more people have suffered harm from heatstroke in Japan due to global warming and the abnormal climate, and there is now a pressing need to identify and prevent the risk of heatstroke in schools and facilities that protect our children, as well as in civil engineering and construction industry.

In response, NEXTY Electronics has developed the IoT-enabled "Heatstroke Guard System."

The system works using sensor terminals installed in measurement locations. Measurements are sent to a storage server in the cloud in real-time. This data is sent to a PC or mobile device, allowing a user to remotely grasp the situation of the installation site and urge those on-site to take measures to prevent heatstroke. In addition to sending warning e-mails, the LED light on the sensor terminal lights up to notify those at the installation site of the risk of heatstroke.

This system uses a communication band that allows for stable communication which is resistant to obstacles. It also uses mesh communication\*<sup>1</sup>, allowing it to cover an extremely wide area simply by installing additional sensor terminals. The sensor and host terminals have been designed to use less electric power, allowing them to run an entire season on just four AA batteries each.

The system can be used in a variety of situations both indoors and outdoors, including construction sites, education facilities, and nursing homes.



Install one host terminal on site, and then install sensor terminals wherever people are

\*1 WBGT value: An index calculated from three indicators (relative humidity, solar radiation/radiant heat, and ambient environmental temperature). Heatstroke is more likely to occur when the WBGT value is high.

\*2 Mesh communication: A method of transferring data either directly or through a slave device (sensor terminal) to a master device (host terminal), by using the slave device as a relay.



## [Product Details]

- Can send the WBGT values of the installation site in real-time\*3 from the sensor terminal, over the host terminal, to a server in the cloud.
- The system uses the cloud, which makes it possible to grasp the situation of the installation site and to manage or graph the log anytime, anywhere, by a smartphone or other mobile device.
- Can send warning e-mails to installation site supervisors and workers.
- Uses the 920 MHz band for communication between the host terminal and sensor terminals, allowing for long distance communication which is resistant to obstacles and more stable than Wi-Fi or Bluetooth.
- Uses mesh communication to communicate over a wide area.
- The LED on the sensor terminal lights up red when the WBGT warning level is reached, quickly notifying those at the installation site that there is a risk of heatstroke.
- NEXTY Electronics is currently investigating functionality to predict WBGT values for the following day, based on log information and the weather forecast for the following day.

\*3 Delays may occur depending on the communication environment.

## [About NEXTY Electronics Corporation]

As a core firm of Toyota Tsusho group in electronics business, NEXTY Electronics pursues top-class scale business in car electronics sectors. It also aggressively diverts many cutting-edge technologies, such as automated driving technology and connected technology cultivated in these sectors, to peripheral industries, such as agricultural machinery. Through its specialties of technologies and commercial products, it is responding to customer and global needs in a wide range of fields that include autonomous driving, IoT and industrial equipment, thereby providing solutions the challenges faced by today's society.

### <Profile>

Corporate Name : NEXTY Electronics Corporation  
Head Office : 2-3-13 Konan, Minato-Ku, Tokyo, Japan  
President : Atsushi Aoki  
Our business : Semiconductor and electronics product sales  
Embedded software development  
In-house product development, etc.  
Capital : 5,284 million yen (Toyota Tsusho Corporation 100%)

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