

# Together against Covid-19 Pandemic

## **BioRN Member interested in cooperation:**

### **Contact Person (Name and Position):**

Ms. Mei-Huey Chen

Project Manager/ ITRI Berlin Office

### **What can we offer:**

Among the COVID-19 confirmed cases who have developed symptoms, nearly 90% of them had fevers. Therefore, temperature screening is a vital measure to stop the chain of infection.

ITRI's (Industrial Technology Research Institute in Taiwan) intelligent thermal image body temperature measurement system features four main characteristics, namely AI facial recognition, indoor/outdoor adaptability, dynamic measurement for multiple persons, and ability to deploy quickly. Up to 9 persons could be measured nearly simultaneously within a distance of 3 meters without any body contact. The accuracy rate is over 90%.

The system combines several R&D results, including AI facial technology, which quickly captures facial images and carries out infrared body temperature sensing. Meanwhile, its constant temperature control technology minimizes indoor and outdoor temperature differences. A color image correcting algorithm can simulate high-quality sensing, and IoT is employed in linking personal mobile phones to other information-related machinery.

This fever detection system is suitable for places where large numbers of people file through, such as schools, housing communities, office buildings, public transportation etc. The system has been introduced in elementary and secondary schools in Taiwan, making normal school operation possible despite the outbreak of the pandemic one year ago.

### **What are we looking for:**

Joint research, deployment or other application possibilities are to be discussed

### **Useful links:**

[https://www.itri.org.tw/english/ListStyle.aspx?DisplayStyle=01\\_content&SiteID=1&MmmID=1071461555150623702&MGID=1071463034212653145](https://www.itri.org.tw/english/ListStyle.aspx?DisplayStyle=01_content&SiteID=1&MmmID=1071461555150623702&MGID=1071463034212653145)

### **Please contact us here:**

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### **What can we offer:**

To relieve burdens of tracking inspectors on the frontline, ITRI (Industrial Technology Research in Taiwan) launched the HoMe Care Quarantine Service.

The system features four highlights : 1. highly accurate positioning (less than 10 meters) thanks to the integration of multiple sensing information collected from cellular base stations, GPS, Wi-Fi connections, and gyroscopes; 2. highly accurate identity verification that utilizes mobile phone biometrics (facial recognition or fingerprints for identity verification) ; 3. privacy protection that prevents the app from storing user data, which are uploaded to physically separate intranet servers and deleted once the quarantine/isolation period is over; 4. high convenience that enables high scalability and bilateral reporting of the system.

The bilateral reporting mechanism automatically schedules dials to those in quarantine/isolation to keep track of their whereabouts and allows home quarantined/isolated individuals to report to the system in an efficient way. More importantly, the virtual app service platform manages app versions in the backend so that it only takes one modification for every update to be run on all models of mobile phones. App operators do not need to run tests on different phone models, and users do not have to constantly update the app on their phone.

The app can also be connected to services that local governments provide for those in home quarantine/isolation, such as garbage disposal, meal delivery, and telemedicine.

The system will be further expanded to senior citizens living alone, school-age children, and individuals whose location and needs should be tracked to provide necessary care and support. Are more applications feasible? Rescue after natural disasters? Tracking of toxic waste treatment? Or something else?

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