

For Immediate Release

Hong Kong Computer Society Announces the Winners of the newly created Pandemic Innovative Digital Solution Awards 2020

9 corporate winners and 4 student winners were recognized for their IT solutions to fight against the pandemic.

18 December 2020 Hong Kong— Organised by Hong Kong Computer Society (HKCS), The Pandemic Innovative Digital Solution Awards 2020 (PIDSA 2020) online awards presentation ceremony was successfully held today. 13 winners, including 9 from local corporates and institutions, 3 from local secondary schools and 1 from vocational training institute, are being recognised for developing outstanding information technology (IT) innovation, solutions, products and applications that help the community to prevent, fight and overcome the recent Covid-19 outbreak in Hong Kong.

PIDSA 2020 is a newly created awards for local IT professional, organised by HKCS and supported by Office of the Government Chief Information Officer (OGCIO), the Government of the HKSAR and other professional and industry bodies. All Hong Kong registered entities with proof of Business Registration; or students from local registered tertiary institutions, including under-graduate and post-graduate students or local secondary schools are eligible to participate.

Dr. Ted Suen MH, President of the HKCS expresses his hearty congratulations to all winners. “On behalf of HKCS, I would like to congratulate those award winners for their hard-earned success. They must undergo strict assessment, judgment and inspection, and outperform many other standing creative products.”

List of winners for The Pandemic Innovative Digital Solution Awards 2020:

Winners	Awarded Entries	Entries Descriptions
PIDSA 2020 - Outstanding Healthcare Award <i>(Alphabetical Listing by Company Name)</i>		
Hong Kong Communications Co. Ltd	UVC Disinfection Robot	Disinfection robot helping different industries to clean their environment automatically and reduce affection
Hong Kong Productivity Council	kNOw Touch	The solution is a 2D infrared sensor device for contactless lift button application. It eliminates the need to touch the button when selecting the elevator floor, reducing the chance of infection
Hospital Authority	HA Digital Platform and Service Suite for Combating COVID-19	Digital Platform and Service Suite is developed by HA for the fight against the epidemic, consisting of Cases Reporting, Isolation Bed Monitoring, Admission Allocation and Automatic Lab Test Result Notification.

to be continued...

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PIDSA 2020 - Outstanding Tracking and Surveillance Award <i>(Alphabetical Listing by Company Name)</i>		
Logistics and Supply Chain MultiTech R&D Centre Limited / Compathnion Technology	StayHomeSafe Home Quarantine Monitoring Solution	A solution that supports compulsory home quarantine by requiring confine to install a phone App and to wear a paired e-wristband so that he / she is constantly tracked to determine if he/she stays at his/her dwelling place.
WildFaces Technology Limited	Anti-Contagion AI Suite	A comprehensive set of Vision Based AI Systems designed to provide an organization with the ability to manage their facility during the pandemic.
PIDSA 2020 - Outstanding Productivity Award <i>(Alphabetical Listing by Company Name)</i>		
Midas FMS Limited	Events GoVirtual	An innovative integrated digital platform with 3D animated landing page that enables exhibitions and events to be held online and makes event on-the-go possible.
Rice Robotics Ltd	Autonomous Delivery and Disinfection Robots	Autonomous delivery robots and disinfection robots can operate elevators and turnstiles, charge, and navigate in crowded areas without help, reducing contact between people during the epidemic and hence reducing the spread of COVID.
PIDSA 2020 - Outstanding Education Award <i>(Alphabetical Listing by Company Name)</i>		
Snapask Hong Kong Limited	Snapask Safe-at-home Learning Support Scheme (Video)	Providing free online tutoring for underserved students. Students use the app to shoot textbook questions and qualified instructors will provide rapid one-on-one interactive homework guidance.
GRWTH Limited	Cloud On-Demand Online Teaching Support Program for the Hong Kong Education Industry	Providing free-of-charge, online teaching video-on-demand (VOD) services to kindergartens, primary and secondary schools in Hong Kong to support home learning.

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HKCS Announces the Winners of the newly created PIDSA 2020 (Page 3)

PIDSA 2020 - Outstanding Student Award <i>(Alphabetical Listing by School Name)</i>		
St. Paul's Convent School	Laughter Catcher	An app that spreads laughter. After recording and sharing Laughter Yoga videos, AI analyzes the audience's selfies to measure the audience's happiness score and give feedback
St. Stephen's College	Distance buddy	Using AI to design customized online exercises and quizzes for individual student, which are within his/her zone of proximal development, to improve their level and help teachers understand the progress of students' home learning
HKTA The Yuen Yuen Institute No. 3 Secondary School	Green Smart Tablet Sanitizer	Designing and modifying the tablet case for disinfection
Department of Information Technology, Hong Kong Institute of Vocational Education (Lee Wai Lee)	All Screens	AI virtual teacher and teaching assistant combined with AR and 3D animation answer student questions

“HKCS is proud to be the organiser of PIDSA 2020 and it is one of the major events celebrating the 50th anniversary of HKCS this year. The awards aims to recognise the organisations or people who create and deliver outstanding IT solutions and services that have significant contribution to the society to fight against the pandemic, share the successful solutions and promote the possibility of wider application, and collaborate across the various industries to establish solidarity and common goal to overcome the pandemic. The winners will not only receive trophies of the awards, but also be considered for nomination to other international awards such as Asia Pacific Information and Communication Technology Alliance Awards (APICTA) and so on by HKCS.” Added. Dr. Suen.

Mr. Kelvin Har, Chairperson of the PIDSA 2020 Organising Committee and HKCS Vice President (Community Services) said, “We are also pleased to have invited Prof. Gabriel Leung, GBS, JP, Dean of Medicine, The University of Hong Kong as the Chairperson of PIDSA 2020 Panel of Judges. The awards will be judged based on Value, Innovation, Technology Used and Timeliness and Execution of the applications.”

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About the Hong Kong Computer Society (HKCS)

Founded in 1970, the Hong Kong Computer Society (HKCS) is a recognised non-profit professional organisation focused on developing Hong Kong's Information Technology (IT) profession and industry. Their members come from a broad spectrum of Hong Kong's IT community, from corporations to like-minded individuals, all coming together to raise the profile and standards of the IT profession and industry. As a well-established IT professional body, the Society is committed to professional and industry development as well as community services to ensure the IT sector continues to make a positive impact on peoples' lives with three main goals, namely, 1) talent cultivation and professional development, 2) industry development and collaboration, and 3) the effective use of IT in our community. For more details, please visit <http://www.hkcs.org.hk>

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Appendix: Summaries of PIDSA 2020 Winners

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Appendix: Summaries of PIDSA 2020 Winners

PIDSA 2020 - Outstanding Healthcare Award

Hong Kong Communications Co. Ltd UVC Disinfection Robot

The best way of dealing pandemic is to kill it in the first place. To prevent the spread of COVID-19, keeping environment sanitized is incredibly important. However, it is time consuming & cleaner has to take the risk of being infected if the process is done manually.

Hong Kong Communications Co. Ltd disinfection robot is helping different industries to clean their environment automatically and reduce affection (such as office, patient rooms, operation rooms in hospital, schools classroom, etc):

- Apply simultaneously keeping track of location and mapping (SLAM) constructing or updating a map of an unknown environment while simultaneously keeping track of location automatically.
- User can schedule and sent the robot to disinfect in specific location in specific time.
- Installed with proven powerful short wavelength ultraviolet-C (UVC) lights that emit enough energy to literally shared the DNA or RNA of any microorganisms.
- For safety, IR-motion sensor is installed to lower the risk of someone direct contact UV-C light
- HKC APP can remote control the robot and provide the details data for further analysis
- Robot will travel back to charging station while the battery level is low automatically

Hong Kong Productivity Council kNOw Touch

The product, kNOw Touch is a 2D infrared sensor device for contactless lift button application. It provides an additional input signal for lift floor button panel. The technology can be applied to all brands/models of lift as the interface of kNOw Touch with lift is built based on the physical setup, no protocol is needed.

It has a calibrating function for user to set up the sensing region and link up the sensing inputs with buttons easily. No coding is required.

The built-in intelligent of kNOw Touch can detect errors such as interference by moving object across the panel or blockage of detection area by a large object. It can effective eliminate the unintentional triggering of lift buttons due to unusual behaviors.

Hospital Authority

HA Digital Platform and Service Suite for Combating COVID-19

Hospital Authority (HA) has implemented a suite of well-orchestrated IT solutions specifically for combating the Coronavirus Disease 2019 (COVID-19) outbreak, which aims to support provide rapid and effective actions in response to the ever-changing situation while at the same time maintaining its essential healthcare service delivery and sustaining the morale of frontline staff as far as practicable, without compromising the safety and quality standards.

The Rapid Response Platform and Solution comprises of the following 4 key components:

- **COVID-19 Case Reporting Platform:** with the COVID-19 case reporting platform, known as the “eNotification system for COVID-19” (or eNID for short) individual HA clinical professional can conveniently report cases with key risk factors of COVID-19 (e.g. showing certain symptoms or having been in contact with known patient clusters etc.) during patient consultation. The reporting data will then be shared and be accessible in real time to all public hospitals in Hong Kong, as well as to the headquarters' Major Incident Control Center (MICC) for isolation bed allocation and coordination across all hospitals.
- **Isolation Bed Monitoring Dashboard:** once a suspected or confirmed case of COVID-19 has been identified, up-to-date information on the availability of Air-borne Isolation Rooms (AIIR) across all hospitals in HA is vital in order to arrange the admission of the patient concerned as soon as possible. The Isolation Bed Monitoring Dashboard was thus developed in order to allow key decision makers, from hospital and Cluster bed coordinators and senior executives, to the MICC in the HA headquarters, to acquire a comprehensive visualization of the occupancy of AIIR in HA (and later the community isolation facilities in AsiaWorld Expo (AWE) and Lei Yue Mun Park & Holiday Village) based on data from eNID and other systems in a near real-time manner. It also includes key information about the room occupancy, such as clinical specialty, occupants' gender, family group etc. which are vital to the bed allocation decision making.
- **COVID-19 Admission Allocation System:** admission of a confirmed COVID-19 patient is no easy feat: it needs to coordinate and harmonize between the admission request process by Department of Health based on lab test results, the case management process at AWE Community Treatment Facility, as well as the case allocation processes of HA's 7 Clusters. To deal with such complexity, the Admission Allocation System was developed and deployed within 2-week time which streamlined the above workflows and greatly enhanced the efficiency of COVID-19 cases admission.
- **Automatic Lab Test Result Notification Platform:** with enormous amount of the COVID-19 laboratory test results conducted every day, it is important to provide test results to the clinicians and citizens accurately and rapidly. While test results of all cases are made available on existing HA's Clinical Management Systems (CMS) and Laboratory Information System (LIS), for the negative cases a text notification will be sent automatically to the patients within 24 hours via short message.

PIDSA 2020 - Outstanding Tracking and Surveillance Award

Logistics and Supply Chain MultiTech R&D Centre Limited / Compathnion Technology StayHomeSafe Home Quarantine Monitoring Solution

StayHomeSafe Home Quarantine Monitoring Solution (SHS Solution):

- SHS Solution:
 - SHS Solution supports compulsory home quarantine by requiring confine to install a phone App and to wear a paired e-wristband so that he / she is constantly tracked to determine if he/she stays at his/her dwelling place. The tracking device is primarily the confine's personal smartphone or a device provided by the Government. The tracking device sends to the monitoring system with 1) the signals emitted from the e-wristband (to ascertain the person with the e-wristband is near the tracking device), together with 2) the geo-fencing information of the tracking device itself (to ascertain the tracking device is in the quarantine premise). The SHS monitoring system will generate alerts if any anomaly occurs. Government officers at the monitoring center will take suitable actions based on the anomaly alerts.
- e-wristband and Tracking Devices
 - Apart from the App-based tracking solution and its backend dashboard, the design and production of the e-wristbands is one of the essential parts of the SHS Solution. E-wristbands must be anti-tamper, waterproof and suitable for indoor environment, so that the confine can wear it all the time throughout the 14-day quarantine period. LSCM has designed and worked with vendors to make sure that the e-wristbands can help enforce the quarantine measures without jeopardizing personal data privacy. In addition, different tracking devices and geo-fencing technologies are adopted in the SHS Solution for the following two types of confinees:
 - ◆ Smart-phone users (SP-users) – the ones who have smartphones and are familiar with using them
 - ◇ SP-users are required to install SHS mobile app onto their smartphones, together with the e-wristbands provided by the Government.
 - ◆ Non-smart-phone users (NSP-users) -- the ones who have no smartphones, or do not have internet access at the quarantine premises, or do not know how to use smartphones
 - ◇ NSP-users will be given e-wristband paired with a tracking device provided by the Government with logistics support from LSCM. The device will be used for location tracking and detection by the monitoring system of the SHS Solution. The tracking device as well as the monitoring system are designed and developed by LSCM to achieve easy-to-use plug-and-play usability

Both designs have made sure that the privacy of the confinees are protected. An independent privacy impact assessment as well as an information security risk audit have been conducted by third party professionals to confirm that the solution and the data exchange process comply with the requirements of the Personal Data (Privacy) Ordinance (Cap. 486) and the Information Technology Security Policy and Guidelines of the Government.

WildFaces Technology Limited Anti-Contagion AI Suite

The IQ-Anti-Contagion Suite is a comprehensive set of Vision Based AI Systems designed to provide an organization with the ability to manage their facility during the pandemic. It is designed to be Accurate, Automated, Comprehensive and fully integrated such that a single system can takeover tedious and time-consuming human processes required to keep workers and customers safe.

Multiple strategies are required to keep people safe during the pandemic. The systems for these need to be comprehensive and integrated and operate at a minimal cost in an environment where organizations are financially constrained.

This system is specially designed for organizations that cannot afford the high consequential costs of missing virus carriers resulting unnecessary spread of the contagion resulting in having to shut down their facility.

The Anti-Contagion Suite consists of the following capabilities:

- Automated Fever Detection/Tracking for extreme crowd
- Social Distancing Detection
- Contactless Access Control
- PPE Detection
- Evacuation Management
- Total Privacy Protection

This suite is very suitable for schools, hospitals (particularly emergency wards), Airports, Transportation hubs, public places, large office complexes / facility management, old age Facilities, Utilities, distribution hubs and manufacturing plants all of which have to keep operating despite the pandemic.

PIDSA 2020 - Outstanding Productivity Award

Midas FMS Limited Events GoVirtual

Events Go Virtual is an innovative integrated digital platform that enables exhibitions and events to be held online and makes event on-the-go possible.

During the outbreak of COVID-19, business activities in the exhibitions and events sector are affected severely due to quarantine or social distancing measures imposed by the governments. Many events are being postponed or cancelled. Events Go Virtual launched by Midas is designed to provide a virtual platform with 3D animated landing page for organizers to bring industry professionals together in hybrid events and for exhibitors to showcase their brands, products and services in a booth virtually. It supports live streaming of keynotes or conferences, interactive chatrooms, video chat, business matching for visitors to attend with post-show data available for analytic. Ultimately, the platform helps the economy to resume business activities in this critical time.

With assorted features supported by Events Go Virtual, organizing or participating exhibitions and events is no longer restricted by physical circumstance and geographical boundary, it is an effective event marketing and lead generation solution to help clients in achieving global reach and drive engagement.

Rice Robotics Ltd

Autonomous Delivery and Disinfection Robots

At Rice Robotics, we are building the infrastructure for next-generation corporates to deploy fleets of robots. Our robots are autonomous and can operate elevators and turnstiles, charge, and navigate in crowded areas without help. Rice, our delivery robot, and Jasmine, our disinfection robot, are freeing up employees to focus on more meaningful tasks in Hong Kong, Japan and Thailand.

Jasmine is a disinfection robot that vaporizes sterilizing fluid and reduces the spread of covid because it can be deployed amongst people in crowded areas safely. Rice is an autonomous delivery robot that delivers food, drinks and other goods, minimizing human to human contact during the pandemic. Both Jasmine and Rice are autonomous mobile robots, meaning that they can operate elevators and turnstiles, charge and navigate crowded areas without human assistance.

We currently have 20 Rice and Jasmine robots deployed in Hong Kong, as well as in Japan and Thailand. Our business has seen an increase in business because our robots directly help reduce the spread of covid.

PIDSA 2020 - Outstanding Education Award

Snapask Hong Kong Limited

Snapask Safe-at-home Learning Support Scheme (Video)

Snapask has made available its 1-to-1 online tutoring service to Hong Kong students of low-income families that have been affected by school closures for free. The latest effort is in collaboration with The Hong Kong Federation of Youth Groups (HKFYG), Association of IT Leaders in Education (AiTLE), Hong Kong FlippEducators (Flippeducators@HK), and Hong Kong Association of Careers Masters and Guidance Masters (HKACMGM).

The initiative is expected to benefit 4,000 students from the underserved segment. Each student will receive 30 free one-on-one tutoring sessions, or about 15-25 hours, via the Snapask mobile app. From the safety and comfort of their homes, students can take photos of questions from books with the app, and qualified tutors will provide help in timely, one-on-one, and interactive sessions online.

GRWTH Limited

Cloud On-Demand Online Teaching Support Program for the Hong Kong Education Industry

Students in Hong Kong are required to continue their studies through online channels without returning to schools at the beginning of the new school year. With the increasing popularity of online teaching, many schools have been catching up with implementing distance learning. In response to the ever-growing demands of the education sector for services that help optimise and enhance online teaching efficiency, GRWTH along with Tencent Cloud co-launched the “Cloud On-Demand Online Teaching Support Program for the Hong Kong Education Industry”, providing free-of-charge, online teaching video-on-demand (VOD) services to Hong Kong kindergartens, primary and secondary schools.

By integrating GRWTH App and Tencent Cloud's highly efficient VOD server located in Hong Kong, the new function allows schools to manage teaching videos systematically and efficiently as well as closely follow up students' learning progress, while students can watch the videos smoothly and stably at home anytime, continue their studies at ease under the new normal of the education sector.

The program has officially opened for applications on 28 Aug 2020 from Hong Kong kindergarten, primary and secondary schools; and received applications for more than the quota (50 schools) of Phase 1 within 3 days.

PIDSA 2020 - Outstanding Student Award

St. Paul's Convent School Laughter Catcher

Laughter Catcher is an app that spreads laughter by letting users mimic their friends' laughter and practice Laughter Yoga, then record their own laughter videos and share it with others. The app prompts the user to take a selfie after watching their friend's video and Laughter Catcher will call the Microsoft AI emotion recognizer¹ in the cloud and automatically assign a happiness score based on the facial expression of the user. The daily happiness scores can be recorded for big data analysis when the user base grows. Every user will get a Happiness Score after viewing their friends' videos, and these scores will all be accumulated to the video creator's Influence Score.

For example, once I login to my account, I can see a list of my friends' videos. After I finished watching my friend Venus' laughter video, the app switches to a page where I can take a selfie. Then, it uses AI to analyze my facial expression and assign a happiness score. If my score is 100, Venus' influence score will increase by 100. If Venus accumulated 10,000 Influence Score that means her laughter videos has already been viewed by over 100 friends. This will encourage users to make their own videos to further spread the laughter.

After users sign up, they will have full access to all the different functions in Laughter Catcher, which include free laughter yoga videos, an AI emotion recognizer page to see if the user is happy or not, a page to add friends to their friends list, a page to watch their friends' laughter yoga videos, and lastly, a page to upload their own videos to Laughter Catcher so their friends can mimic their laughter too!

St. Stephen's College Distance buddy

In these trying times, it has been very hard for teachers to teach and communicate with students, while students also face difficulties in learning as they are unable to go to school and lack the motivation to learn. Through this app, we rectified this problem through creating a platform for teachers to provide learning opportunities and assess students' abilities.

This project has various benefits on students and teachers. First, students can improve by doing various quizzes tailor-made by the AI based on their knowledge about the topic. Second, teachers can access students' performance and know their study progress, allowing them to adjust teaching schedules and provide more personalized support to students. Third, students' distress and confusions in learning can be reduced by having customized exercises within their zone of proximal development. Last but not least, teachers can enhance students' motivation through sharing students' learning outcomes and rankings, which encourages students to study harder.

HKTA The Yuen Yuen Institute No. 3 Secondary School Green Smart Tablet Sanitizer

Recently, smart gadgets are increasingly prevalent in society. Research indicates that the personal smartphone is ten times dirtier than the toilet and the presence of the commonly found bacteria like E.coli may cause food poisoning and diarrhea. The personal smartphone or tablet is already very filthy, let alone the smart gadgets displayed in an electrical appliances shop or the tablets used to order in a restaurant that are encountered by hundreds or thousands of people.

A case of the tablet is designed and modified so that the sanitization of the personal as well as the tablets widely used by the public.

Department of Information Technology, Hong Kong Institute of Vocational Education (Lee Wai Lee) All Screens

The cloud based intelligent virtual teaching assistant system (All Screens) is an online learning platform. It can attract and educate students on a large scale.

After digesting the uploaded teaching materials, Miss MA, the system's artificial intelligence teacher, can answer basic questions from students at any time. If students have other questions, they can ask their real teacher at school. Miss Ma, the virtual teaching assistant powered by augmented reality and 3D animation design and production, can enhance the learning atmosphere.

The system is an Amazon world-wide award winning product and supports multiple languages. The enhanced version has been adopted by teachers from many overseas university after it's launching in March this year.