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REGIONAL REPORT

Initiatives of Indonesian ICT Players in Combating Covid-19

By Wiseto Agung, Indonesia ComSoc Chapter Chair

The spread of the corona virus is increasing exponentially and the World Health Organization declared that it is a world pandemic on March 11, 2020. As of this article being written, there are 2,261,425 confirmed cases, 154,734 confirmed deaths, and 213 countries have been affected around the world. Covid-19 has affected Indonesia, including our education, economics and health. The Indonesian government had taken many measures to avoid the spread of Covid-19.

In this report, we would like to illustrate some initiatives taken by Indonesian ICT players in combating the Covid-19 pandemic. From the Governments sector, they made an application named PeduliLindungi (meaning Care and Protect). This application is supported by the Ministry of Communication and Informatics or Kementerian Komunikasi dan Informatika (KOMINFO). This application is intended to be used by citizens so that the Indonesian government is able to track and trace the location of the citizen by enabling each user to turn on bluetooth on their smartphone. This application used by every user will share their location whenever they are going outside, so that the search of the people that had been confirmed to have the Covid-19 can be traced. This application has been launched for two different mobile operating systems, i.e. iOS and Android. Users can download the application to their respective application store. Users should not be worried about providing their real time condition because this application is safe from phishing and malware and their data privacy is being protected under Indonesian government laws. The government's cooperation with all Indonesian citizens by using this app is expected to break the chain reaction of the Covid-19 disease from being spread.

Furthermore, some telecommunication operators have taken steps to combat this disease. For instance, Telkom Group and the Ministry of State Owned Enterprises is supporting the strategy of working and studying from home. Telkom Group plays an important role as the major Internet Services Provider (ISP) to give the best services during this pandemic. IndiHome, which is a Telkom Group product, has provided free upgrade in terms of Internet connection speed for their users for one month. Telkom Indonesia also publishes a web page for users to monitor the number of cases in graphical representation by using machine learning so that they are able to locate the most infected area and they also can view some prevention. Mobile operators, namely Telkomsel, as well as XL Axiata and Indosat Ooredoo, have given free Internet quota for 30GB for students in order to access their e-learning providers. This is to ensure that all of students, teachers and lecturers are able to conduct their learning and lecturing activities during this emergency.

In collaboration with The Ministry of Communication and Information Republic of Indonesia, WhatsApp (Facebook) has committed to providing a special policy for Indonesia to be able to transmit WhatsApp blast messages regarding the Covid-

19 pandemic. So far, WhatsApp only gives this policy exclusively to two countries, Indonesia and Singapore.

In the start-up sectors, Qlue, Qiscus, Kata.ai, and Volantis, in cooperation with MDI Ventures, have taken the initiative during this pandemic by creating an application named QlueApp that integrated multiple data by using chat-bot and the ability for citizens to view the latest report regarding Covid-19 information. By using this application, citizens can report suspected people by giving their location through the platform. This app is intended to help the Indonesian Government to prevent the spread of Covid-19. Users are also able to monitor Covid-19 disease statistics that are displayed on the application. Not only monitoring the diseases, it is also being used by the staffs of the National Disaster Management Authority (BNPB) in the field, so that they can cooperate with each other effectively and efficiently.

Another Indonesian startup, e-hailing Gojek, collaborated with the startup Halodoc, to develop a telemedicine platform that is integrated on the Gojek application. This telemedicine integration is used by their users to provide consultation using the application. There are more than 20,000 licensed medical doctors who came from the Halodoc system. Gojek users can use this app to consult directly with the doctors from Halodoc regarding their health and symptoms of Covid-19.

Some universities also have several initiatives to reduce the spread of Covid-19. Telkom University had made some innovative products during this pandemic. First, in collaboration with the Indonesian Institute of Sciences, the Autonomous UVC Mobile Robot for Medical isolation Room product was made in order to disinfect and sterilize any room without the need of human involvement. This product has been tested at Wisma Atlet, one of the Covid-19 quarantine venues in Jakarta. Chamber Car is made to sterilize and disinfect a car by automatically spraying a disinfectant to all the car's body. Coincidentally, development of this product was led by Dr. Muhammad Ary Murti, a member of ComSoc Indonesia.

In addition, Bandung Institute of Technology developed Vent-I, which is a portable low cost ventilator. This product, which is intended to be operated for emergency use when there is a shortage of ventilators, has been reviewed by several senior medical doctors from Padjadjaran University.

Surprisingly, the innovations were not only initiated in big cities, but also in small villages. For instance, in Panggungharjo suburban, Bantul, Yogyakarta, the villagers are actively reporting their health status and spreading their local products to a platform called pasardesa.id. This platform was developed by the local village government to minimize the movement of the villagers to prevent the spread of Covid-19 and to implement physical distancing that had been advised by the World Health Organization. This platform is used to purchase basic home necessities such as rice, vegetables, sugar, etc. Not only using this platform to deliver basic necessities, the local villagers also use this platform to input their health status to the website every day. This is to help monitor or track the villagers' daily status. More than 19,465 local villagers have reported their health status as healthy and 700 people stated that they are healthy without any symptoms.

In a nutshell, the availability of telecommunication infrastructure and Internet connections across the nation can support every player to play their roles to combat Covid-19.

The 2019 IEEE International Conference on Microwaves, Communications, Antennas, and Electronic Systems (IEEE COMCAS 2019), Tel-Aviv, Israel

By Shmuel Auster, Itai Dabran, Amir Boag, Israel

The 7th biennial IEEE International Conference on Microwaves, Communications, Antennas, and Electronic Systems (IEEE COMCAS 2019) was held 4–6 November 2019 at the David Intercontinental Hotel in Tel-Aviv, Israel. The first two days of the conference included the plenary sessions together with nine parallel sessions, while the third day was reserved for short courses and workshop tracks in five parallel sessions as well as an additional two plenary sessions. The Conference was attended by more than 1900 engineers, academics, and technical developers.

IEEE COMCAS is organized as a multidisciplinary international Conference where scientists, engineers and students can meet and discuss their common interests. In addition, it includes an industry-focused exhibition that features leading companies in the fields of antennas, microwave, solid-state and systems engineering, where colleagues researching and developing the products and systems of tomorrow can interact with their industry colleagues.

This conference was sponsored by the IEEE Israel Section, the Israel AP/MTT Chapter (Antennas and Microwaves), and the AEAI (The Association of Engineers in Israel). It was technically co-sponsored by IEEE Region 8, APS (Antennas and Propagation Society), IEEE ComSoc Israel, AES (Aerospace and Electronic Systems Society), EPS (Electronic Packaging Society), and the European Microwave Association (EuMA).

This year we significantly increased the number of tutorials and industry-oriented invited sessions, making this conference more relevant than ever. This was the largest ever COMCAS with more than 240 technical presentations, 50 posters, 10 courses and special sessions, 52 invited speakers, 88 sessions, nine parallel halls, and 100 exhibition booths over more than 5700 square feet. Emphasis continued to be on applications-oriented research and development, from antennas and devices to systems and software, including GaN technology and applications, SDR and “5G” cellular mobile, biomedical systems and applications, and phased array radars, with strong industry patronage and participation.

Our plenary session was opened with welcome addresses by Shmuel Auster, IEEE COMCAS General Chair; Amir Boag, IEEE COMCAS TPC Chair; Avram Bar-Cohen, IEEE EPS President 2019; Douglas N. Zuckerman, IEEE ComSoc Past President; and Roberto Graglia, IEEE APS President 2015. It was followed by Theodore (Ted) S. Rappaport from NYU-Tandon, who presented a keynote lecture on “Wireless Beyond 100 GHz: Opportunities and Challenges for 6G and Beyond”; Ben Epstein (on



Opening session.



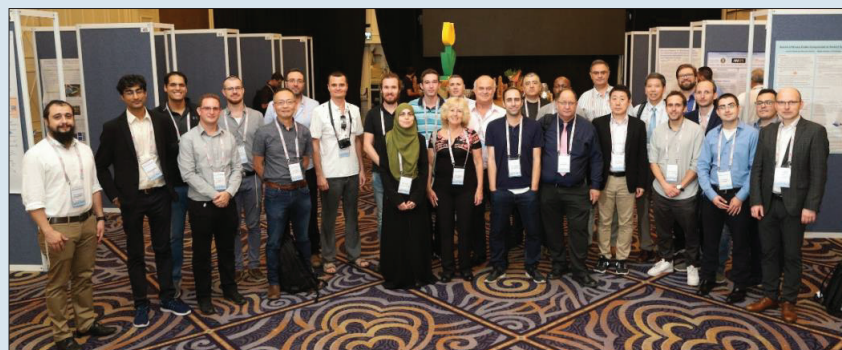
Exhibition.

behalf of Hava T. Siegelmann from DARPA) who presented a keynote lecture on “Lifelong Learning in Nature and Machines”; Yoram Palti from NovoCure, Israel, who presented a keynote lecture on “Tumor Treating Fields (TTFields) from Theory to Clinical Practice”; and Avram Bar-Cohen from Raytheon – Space and Airborne Systems, who presented a keynote lecture on “Wireless Power Beaming.”

Session topics at IEEE COMCAS 2019 included Radar and Microwave Technologies, Defense Challenges and Green Communication, Power Amplifiers and Device Modeling, Antennas, Radar Signal Processing, Networking Technologies, Defense and UAS Applications, Passive Circuits and Components, Computational Methods Non-Intrusive Monitoring, Communication Measurements, Implementations and Resource Allocation, Embedded Electronic Systems and Sensors and Advanced Frequency Synthesizers.

Our WIM/WIE Panel was organized by Amelie Hagelauer. The moderator was Sherry Hess. This panel hosted an invited talk by Yonina Eldar, inspired by the recent book *Alpha Girls: The Women Upstarts Who Took on Silicon Valley's Male Culture and Made the Deals of a Lifetime* by Julian Guthrie. The panel discussed what it takes to move up the management chain and eventually into the C-suite (officers who have the word “chief” in their titles) in a male-dominated tech world. *Alpha Girls* is the story of four women who succeeded in Silicon Valley’s venture capital environment. Five tips extracted from the book were discussed and debated: your family doesn’t need you every second, humor works wonders, don’t sit on the sidelines, find out about the locker room talk, and don’t enable underachievement. The panel session presented the wisdom shared by leading high tech women and individuals’ experience.

We also had a special session of IEEE Young Professionals, chaired by Aleksey Dyskin that covered the fascinating field of industry and research with automotive industry leaders. This session featured Omer Keilaf, CEO of Innoviz



Poster session

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IEEE ComSoc LA YP Session at LATINCOM 2019, Salvador, Brazil

By Gidy Carolina Florez Navarro, IEEE LA ComSoc YP Coordinator 2019, Brazil

During the IEEE ComSoc regional conference in Latin America, LATINCOM 2019 in Salvador, Bahia, Brazil, a Meet Up with congress attendees among students in their last college year and professionals with at least 15 years of career was held. In addition, we invited IEEE and non-IEEE students from local universities to participate in the session.

The Session was organized by Nury Ramirez, 2018-2019 ComSoc Young Professional Chair, and Gidy Florez, LA ComSoc YP coordinator. The activities were carried out by Carlos Lozano, Esmeralda Arzuza, Jose David Cely and Laura Ruiz, members of IEEE LA ComSoc.

In order to take an interactive activity, it started with an Ice Break-



Explanation of ComSoc benefits by LA ComSoc board members and Technical trivia.



Attendees and YP volunteers.



Poll of participants about their knowledge in ComSoc.

er. Participants introduced themselves and then divided into two groups to guess each other's group names. Then, to know more about participants' expectations regarding the IEEE Communications Society, a survey was carried out with simple questions about their degree of knowledge about ComSoc, and the reason they attended the Meet Up. Different answers were given and after that, a presentation about IEEE ComSoc was given to the attendees, showing the Society, IEEE Young Profes-

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CONFERENCE REPORT

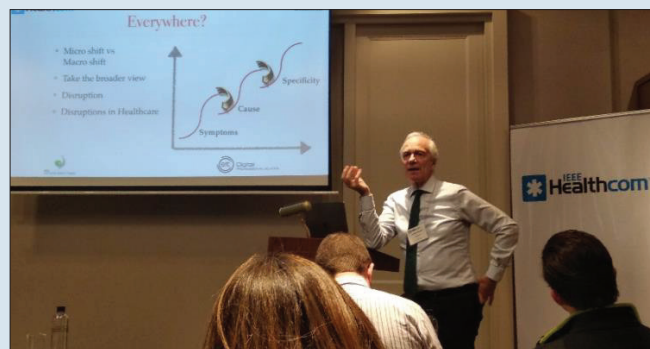
Highlights from the IEEE International Conference on E-health, Networking, Application & Services 2019 (HealthCom 2019)

By Andres Navarro and Carlos Lozano-Garzon, Colombia

The 2019 IEEE International Conference on E-health Networking, Application & Services (HealthCom) was held in Bogota, Colombia 14-16 October 2019. The conference was jointly organized by the IEEE Communications Society and IEEE Colombian Communications Society Chapter.

HealthCom 2019 attracted attendees from 12 different countries around the world to exchange ideas, discuss innovative and emerging solutions, and develop collaborations in the healthcare field. Also, it is important to remark the presence of four selected keynote speakers.

Our first keynote was Dr. José García-Tirado, a Colombian researcher who works at the Center for Diabetes Technology (CDT)-University of Virginia. Dr Garcia delivered the speech entitled "Exercise-safe Artificial Pancreas for Adults with Type 1 Diabetes using a Model Predictive Controller with Behavior Recognition." This lecture addressed the design of an exercise-tolerant artificial pancreas (AP) for blood glucose (BG) stabilization and hypoglycemia prevention in people with Type



Roberto Saracco during his keynote speech.

1 Diabetes (T1D) with detectable patterns of exercise.

The second keynote was by Joel Rodrigues, a professor at the Federal University of Piauí, Brazil, and senior researcher at the Instituto de Telecomunicações, Portugal. Prof. Rodrigues presented topics related to "e-Health and Mobile Health Technologies."

The second day of keynotes was open by Eng. Cayo Betancourt, who works at Ericsson and has over 18 years of professional experience in the telecommunications sector. Eng. Betancourt currently is responsible for coordinating and direct-

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Technologies; Kobi Morenko, CEO of Arbe; Avi Bakal, CEO of TriEye; and Orr Davon, CEO of Hailo.

Many dedicated members of the COMCAS team, both industrial supporters and conference organizers, saw their contributions recognized at the conference's social events. Conference Chair Shmuel Auster presented Honorary Member certificates to long-time members Ben Epstein, Harvey Kaylie and Steve Weinstein.

Hosting regional conferences in various locations around the world is an excellent way to encourage IEEE Members and Societies and the technical community at large to participate. This helps improve recognition and generates growth for IEEE and its Sister Societies. The 7th IEEE COMCAS conference was highly successful, with participants from 39 countries who expressed their positive feedback and comments during and after the conference. COMCAS continues to be very successful and will likely be well attended in the future by many technologists who lead innovation and have an impact on microwave, communications, antennas and electronic systems technologies.

Shmuel Auster, IEEE COMCAS 2019 General Chair, is with IAI Elta and is the IEEE Israel Section Chair. Itai Dabran, IEEE COMCAS 2019 Executive Committee member, is a R&D Manager and Senior Lecturer at Technion, Israel Institute of Technology, and the IEEE ComSoc Chapter Chair. Amir Boag, IEEE COMCAS 2019 TPC Chair, is a professor at Tel Aviv University, Israel.

LATINCOM 2019/Continued from page 3

sionals and its benefits of belonging to ComSoc.

Following this, a trivia game with technical and ComSoc topics was carried out using an online application. The attendee that answered the fastest each question received more points, and the one who collected more points received a prize.

Finally, a small panel was given among the four ladies and IEEE ComSoc YP volunteers that work in different fields of telecommunications. The idea was to present how IEEE ComSoc has promoted their careers in the academia, industry and government sectors where each of them works. It should be noted that in addition to being Young Professionals, the panel members are WICE members.

The event closed with a networking space where attendees could know more about each other while they tasted typical local foods and beverages from the city.

HEALTHCOM 2019/Continued from page 3

ing an extensive digital transformation program. His lecture was entitled "5G and Health Care."

Finally, Dr. Roberto Saracco, chair of the Future Directions Committee of the IEEE, his presented his lecture entitled "Digital Transformation: Its Leverage and Impact on Healthcare." Dr. Saracco received a special attention from the conference attendees.

In addition to the regular sessions, attendees shared in social events, some scheduled and others not, like the five-minute salsa lesson given by one of the session chairs during a coffee break. We had the opportunity to have the gala dinner in a typical Colombia venue with very traditional music from the Caribbean region (vallenatos).

The next HealthCom will be held 12-15 December 2020 in Shenzhen, China.

**GLOBAL
COMMUNICATIONS
NEWSLETTER**

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