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CHAPTER REPORT

IEEE ComSoc Panama Chapter Awards to Outstanding Professionals During the Covid-19 Pandemic

By Yessica Sáez, IEEE ComSoc Panama Chapter Chair

The COVID-19 pandemic has led to a rethinking of social practices and production systems that until a few months ago we took for granted. Everything has changed: distance education, telecommuting, suspended social encounters with family and friends, to name a few changes. Despite this, a large part of the population has been able to continue working, has managed to maintain contact with their loved ones, and has been able to take advantage of online platforms so that educational activities are not interrupted. All of this is proof of the remarkable progress in the telecommunications sector, and how it is helping us to keep the social and productive systems running during these difficult times. That is why by the end of 2020 the Communications Society (ComSoc) of the IEEE Panama Section proposed the creation of Awards to Outstanding Professionals during COVID-19 Awards.

The objective of these awards was to distinguish Panamanians, both young and those more experienced, who have made outstanding contributions in the field of telecommunications in relation to COVID-19 during 2020. Thus, two award categories where created: Outstanding Young Telecommunications Professional during COVID-19 and the Excellence Telecommunications Professional during COVID-19.

Yhonattan Young, winner of the Award to Outstanding Professional during Covid-19, Young Professional category, Panama Chapter, 29 March 2021.

Gina Villafañe, winner of the Award to Outstanding Professional during Covid-19, excellence award category, Panama Chapter, 29 March 2021.

The call for nominations was launched on February 8, 2021. The Award to Outstanding Young Telecommunications Professional during COVID-19 was open to young professionals, no older than 40 years, who have worked and resided in Panama during 2020. Candidates could be engineers, scientists, educators, technical executives or creators in the field of telecommunications. They had to demonstrate contributions in the field of telecommunications during the COVID-19 pandemic by 2020. The Award to Excellence Telecommunications Professional during COVID-19 was open to professionals over 40 years of age, who have practiced professionally for at least 10 years. In this category, nominees had to possess scientific and technological products with national and international impact, and have demonstrated contributions in the field of telecommunications during the COVID-19 pandemic by 2020.

After a rigorous evaluation process, the winners in both categories were announced on March 15, 2021.

Yhonattan Young, who works at Copa Airlines as a Technological Infrastructure Specialist, was the winner of the Award for the Outstanding Young Telecommunications Professional during COVID-19, due to his relevant participation in a metropolitan network reengineering project that interconnected different sites such as the Tocumen International Airport, the Headquarters, the Primary Data Center of Copa, as well as other sites in Panama City.

This metropolitan network is essential to be able to provide a world-class service to all the passengers of this company, since it is through reliable connectivity, the different technological services such as applications and interfaces are enabled, which allow Copa Airlines to offer a high-quality product. This reengineering was carried out in a period of five months during 2020 and it involved a lot of learning, since it was precisely during a crisis where people like Yhonattan brought out the innate capacity of the human being to innovate, learn and find solutions.

(Continued on Newsletter page 4)

CHAPTER REPORT

IEEE ComSoc Austin Chapter

Winner of the 2020 Chapter Achievement Award (CAA) and Chapter of the Year (CoY) Award

By Fawzi Behmann, Chair of the IEEE ComSoc, Signal Processing and Consumer Technology Joint Chapter, USA

As the chapter chair for Austin, I am pleased that we received the CAA and CoY awards. This is the third time we have received both awards. The previous times were in 2015 and 2017.

This is a reflection to the dedication of the officers and support by local members and encouragement from the community. The leadership team consists of:

- Fawzi Behmann, Chair
- Norma Antunano, Vice Chair
- Hanan Potash, Past chair
- Vittal Siddaiah, Program
- Nitin Garg, Website
- Eric Zavesky, AT&T Liaison

We are fortunate to have a strong relationship with AT&T, where we held our regular meetings until Q1 2020, when we had to switch to virtual meetings due to the pandemic.

The Austin chapter is part of the Central Texas section with over 4,000 members and 10,000 subscribers. Austin is a vibrant and high-tech hub in North America, and where IEEE Globecom 2014 was held.

I have the opportunity to set up different themes from one year to the next, focusing on advancements in disruptive technologies such as 5G/6G, IoT, and AI, security enabling and block chain enabling many use cases for different markets such as smart cities, public safety, autonomous driving, healthcare and others. As we change the topic title and guest speaker, we witnessed a change in attendance, and that helped create active participation and dialogue.

Technical Meetings

We held 17 technical meetings in a variety of topic areas: Future of Technologies, AI, Sensor Networks, Smart Cities, Future of RF, SDR, Data Analytics, Cyber-Physical Systems, and others. Here is a sample of some of the topics presented:

- "Collaborative Technologies Trends in 2019 that will disrupt the market in 2020", Fawzi Behmann, President of TelNet Management.
- "Underground Sensor Network for Water Pipe Leakage Detection", Prof. Semih Aslan, Texas State.
- "Cyber-Physical System Challenges to the Trustworthiness of Systems", Prof. Al Mok, UT Austin.
- "Accelerating AI using HPC", Vittal Siddaiah, Ingram School of Engineering, Texas State, San Marcos.
- "Using SDRs and FPGAs to create Advanced Wireless Testbeds", Sarah Yost, National Instruments.
- "The Future of RF & Microwave Systems", Erik Luther, X-Microwave Sys.

Our activities went beyond holding technical meetings. The remaining sections cover other initiatives that we conducted.

IEEE Austin and Student Outreach

We have initiated two Student Outreach projects at Texas State, each was an eight-month duration and focused on community hands-on IoT projects.

I introduced these projects to Texas State Administration, and they have accepted them as a part of the acredited program. The two projects each consist of a faculty advisor, lecturer, host sponsor, and two teams, each of four students including a leader. The frameworks of the two projects were signed before of the start of the projects.

The two projects were:

- "Smart Cities Patient Fall Detection"
- "Smart City Concept Garage System"

The Texas State Faculty Advisors were Prof. Semih Aslan and Prof. Damian Valles, and IEEE Host Sponsor was Fawzi Behmann.

(Continued on next page)

Two teams from Texas State University with Fawzi Behmann demonstrating hands-on IoT Outreach Projects on patient fall detection and a garage system.

AUSTIN CHAPTER/*Continued from page 2*

As a host representing IEEE, I established a high-level definition, goal, expectation and project description. The students provided details forming the Statement of Work (SOW), followed by written specification. The focus of the remaining part of the first semester was for the students to dive deeper into the requirements, understanding technology and applications, and defining the architecture of a functional prototype system. Toward the end of the first semester, the students purchased all the material, assembled the parts and started testing individual units. The second term focused on building software and starting sub-system testing, leading to high-level functional prototype testing, storing data in the cloud and implementing AI-based functions.

I had weekly status calls with the students and responded to any of their needs. At year-end with the completion of these projects, the students demonstrated the project at the Texas State year-end senior design day. I handed a certificate of achievement, and I invited students to deliver special presentation to the IEEE Austin chapter as well as facilitated for the students to demonstrate their project at the Texas Smart Cities event. The demo encouraged positive attention and dialog with attendees.

Smart City Summit (SCS)

The Smart City Summit (SCS) was held on December 1 in Austin (https://attend.ieee.org/scs-2019/) The chapter worked closely with ComSoc to drive membership as part of the Summit. Special rates were created. As a result of these efforts, 30 members joined from ComSoc, with 16 being new members. This is the second highest total of new members delivered by a chapter worldwide in this ComSoc initiative held in 2019.

The SCS attracted 133 attendees. The one-day summit was held at the Texas Advanced Computing Center (TACC), one of the largest in the nation. IEEE USA President followed by TACC Executive Director and Fawzi Behmann delivered the summit opening remarks and program outline. The core program content had three segments focused on disruptive technologies and the impact on building smart cities, improving healthcare, and mobility. Each segment had a keynote speaker, followed by a deep dive panel session (four experts and a moderator). At the end of the core program, there was a showcase of innovative projects from startups and students. The program concluded with an Executive Recap session focusing on future directions. There was a special appreciation dinner at a nearby restaurant that was attended by the speakers and special guests and organizers.

The three keynote speakers were:

- Patricia Florissi, Vice President and Global CTO for Sales, Dell/EMC.
- John Cole, Chief Executive Officer of SkyTran.
- David Atienza, Associate Professor of Electrical and Computer Engineering and head of the Embedded Systems Laboratory at EFPL, Switzerland.

Prof. Dharm Sign, DL from Africa, was part of the panel and spoke to the chapter, UT and Texas State Graduate students.

Other Activities

- Jointly presented at a public forum with AT&T Wireless CTO, CEO of Texas Advanced Technology Council on 5G technologies.
- Participated in a panel on "IoT-Smart Networks and Social Innovations" at the IEEE Vision/Innovation Challenges (VIC) Summit.
- Supported the IEEE Women in Engineering International Leadership Conference (WIE) and Supported National Instruments Week held in Austin.
- Supported the ComSoc Summer School and the first Student Conference.

I wish I can share more details, but feel free to reach out to me at f.behmann@ieee.org

A well attended Smart City Summit in Austin including 30 new members.

REGION REPORT

ComSoc Region 9 Discussion Panel

Data Communication Services in Latin America Today and in 10 Years

By José Ignacio Alvarez-Hamelin, Universidad de Buenos Aires, Argentina Chapter Chair, and Diego Dujovne, Universidad Diego Portales, Chile Chapter Chair

On March 25, 2021, a group of ComSoc chapter chairs and invited speakers joined a Discussion Panel hosted by IEEE ComSoc R9, where the topic was "Data Communication Services in Latin America Today and in 10 Years: A User Perspective", organized by the Argentina and Chile ComSoc chapters.

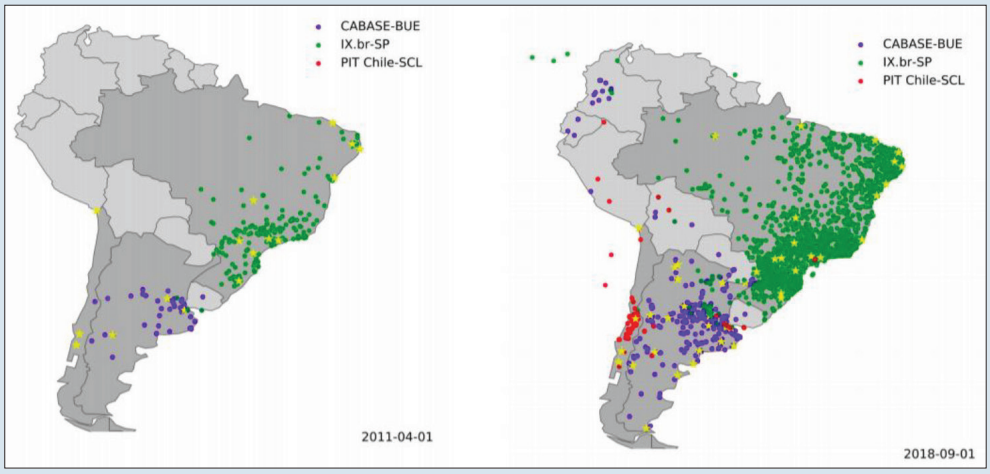
The evolution of data services for the Internet has been far from uniform around the world. On the fixed side, there are regions where FTTH and WiFi6 have arrived, while other regions still lack any connectivity at all. On the mobile side, areas with 2G services are still available in an era when the top-of the line 5G is merely a dream. These contrasts are stronger in Latin America, where internal and international connectivity show the combination of national efforts and traffic demand.

The discussion panel was organized in two parts. The first part provided a brief description of reference state-of-the-art topics, ranging from communication infrastructure to access networks and security. The second part of the panel opened the discussion to the rest of the participants, following questions from the public.

The infrastructure part first introduced the research results of the evolution of IXPs in Latin America. The use of IXPs generates shared resources, specially from content providers, shorter round trip times, and opens the participation to smaller ISPs. The figure below shows the IXP growth in South America between 2011 and 2018 (Carisimo, E., Fiore, J.M.D., Dujovne, D., Pelsser, C. and Alvarez-Hamelin, J.I., 2020. A first look at the Latin American IXPs. ACM SIGCOMM Computer Communication Review, 50(1), pp.18-24).

Second, the discussion turned to the international undersea fiber optic links, the installed capacity and the geography-induced problems. Third, the relevance of the Mutually Agreed Norms for Routing Security (MANRS) for the region was addressed.

Then, the access networks and security part described briefly a number of security threats, a review of the evolution of data networks and trends in Nicaragua, an introduction to the reduction of the digital gap in Perú, and finally an overview of the difficulties on the road to 5G in Bolivia.



IXP growth in South America between 2011 and 2018 (Carisimo *et al.*).

In the discussion part, the presenters answered the questions from the IEEE ComSoc members and general public who attended the meeting. There were both specific questions about the infrastructure trends in Latin America and about the different policies that the governments are promoting.

More than 220 people attended this online event, from different countries in Latin America.

Panama Chapter/*Continued from page 1*

On the other hand, Gina Villafañe, Information Science Consultant in the Government Innovation Authority of Panama, along with other collaborators, has managed to place this country as one of the pioneer countries in the use of technological tools that are integrated with all public and private health systems in services related to the COVID-19 pandemic. Specifically, Gina Villafañe is:

- Lead Engineer, responsible for the design of data mining algorithms for epidemiological monitoring, indicator production and statistical analysis of the Ministry of Health.
- Technical representative at the executive council of the Operation Center for the Control and Traceability of COVID-19.
- Lead Engineer, responsible for the design of the vaccine meter data set for the PanavaC19 operation.

By rethinking how to approach complex problems, the adoption of technology (mature or emerging), intangible assets (knowledge, data, etc.), among others, for the creation of public value, Gina Villafañe is a tangible example that the human talent that Panama has in telecommunications is of very high quality.

In a small but significant virtual ceremony, held on March 29, 2021, ComSoc Panama awarded the winners, who received a certificate of recognition from ComSoc Panama, one year of an IEEE and ComSoc membership, cash, and the admiration and respect of the technical and general community of Panama.

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