Editor's Updates — September 2022

Welcome to the September 2022 Edition of the *IEEE Communications Standards Magazine*. This edition features two Special Issues "Autonomous Networks: Opportunities, Challenges, and Applications" and "Recent and Future Evolution of Wi-Fi." They have accepted five and three articles respectively, which will be introduced by their editors in separate editorials later.

Besides, three articles are also included in this edition on 5G standardization development in 3GPP, all of which are contributed from Industry and delegates of 3GPP standardization. Specifically, the first article is entitled "5G Evolution for Multicast and Broadcast Services in 3GPP Release 17." It introduces the key technical features with respect to Multicast and Broadcast Services (MBS) in 3GPP, e.g., the group scheduling mechanism with unicast reception, shared delivery, and dynamic change of multicast service delivery modes etc. to support reliable, low latency, resource efficient, and massively deployable MBS.

The title of the second article is "Toward Smaller and Lower-Cost 5G Devices with Longer Battery Life: An Overview of 3GPP Release 17 RedCap." This article provides an overview of essential features developed in 3GPP for reduced capability (RedCap) devices so that the 5G system can be optimized to fulfill requirements imposed in industrial wireless sensor networks, video surveillance, and wearables. The use cases, specific requirements, network impacts, and potential future enhancements are also discussed.

The third article is entitled "An Overview of 5G Advanced Evolution in 3GPP Release 18." It presents an overview of the 5G Advanced evolution in 3GPP Release 18, introducing features to enable more flexible and efficient spectrum uses, advance the support of diverse devices, evolve network topology to facilitate different deployments, and provide data-driven,

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intelligent network solutions. The roadmap evolving from 5G to 5G Advanced is also discussed.

In addition, three short articles are presented in the Standards News column, updating the progress in the following standards development organizations (SDO) and standardized technologies:
• IEEE P802.11
  – Artificial Intelligence Machine Learning (AIML) Topic Interest Group (TIG)
  – Supporting Ambient Power (AMP) Communication in Wireless LAN
• Passive Optical Networks (PON) technologies: evolution, network monitoring, and future development

I would like to thank all the authors for submitting their papers to IEEE Communications Standards Magazine and the peer reviewers for reviewing the manuscripts. Jennifer Porcello and Christina Keller on the Communications Society staff have been limitless in their support of this publication. Glenn Parsons, the Founding Editor-in-Chief, has been helping handle the IEEE Commentary Column, and Carlos Cordeiro, the Associate Editor-in-Chief, has been pulling together articles for both the Industry Commentary Column and the News Column.

Biography

Zander Lei (lei.zhongding@huawei.com) is a senior researcher at Shield Lab, Huawei Singapore Research Center. He has been working on 5G security for 3GPP networks since 2016. Prior to joining Huawei, he had been a Lab Head and senior scientist with the Agency for Science, Technology, and Research (A-STAR) of Singapore, doing research and participating in standardization activities on/for various aspects in wireless systems and networks. He was the Associate Editor-in-Chief of *IEEE Communications Standards Magazine* from 2017 to 2019, the Chair/co-Chair and Chief Editor for the Task Forces developing Singapore Standards on IoT and ITS respectively, from 2014 to 2018, the Vice Chair of IEEE 802.11ah Task Group from 2014 to 2016, and PHY Technical Editor of the IEEE 802.22 Working Group from 2006.