

The Future of Telecommunications is Open Source

Editorial

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Abstract: Papers in the September 2020 issue of the *Journal* include the NBN Futures Forum on the social and economic benefits of broadband for digital inclusion and telehealth, the benefits of submarine cables to South Pacific nations, 5G transmission, the economics of over-the-top media, energy efficient wireless sensor networks and a celebration of the life of Liz Fell, journalist and Distinguished Fellow of the Telecommunications Society of Australia (now the Telecommunications Association). This year, open source has moved into focus with the telecommunications industry, with open core systems and open radio access networks for 5G taking centre stage. The *Journal* welcomes contributions on telecommunications and the digital economy.

In This Issue

In this issue of the *Journal* papers cover the NBN Futures Forum on the social and economic benefits of broadband for digital inclusion and telehealth, the benefits of submarine cables to South Pacific nations, 5G transmission, the economics of over-the-top media, energy efficient wireless sensor networks, and a celebration of the life of Liz Fell, journalist and Distinguished Fellow of the Telecommunications Society of Australia (now the Telecommunications Association).

Elizabeth (Liz) Dyneley Fell, 1940-2020 provides a look back at the life and work of Liz Fell, a freelance journalist who was elected a Distinguished Fellow of the Telecommunication Society of Australia in 2003 for her notable and enduring contributions to Australian telecommunications.

Malcolm Turnbull – A Feisty Interview with the Shadow Minister is a historical reprint of Ms Fell's interview with the future Prime Minister who, as Minister for Communications in 2013-15, implemented the multi-technology mix redesign of the National Broadband Network.

The NBN Futures Forum: Social and Economic Benefits of Broadband for Digital Inclusion and Telehealth provides a summary of the fourth NBN Futures Forum, held online, on the

theme of social and economic benefits of broadband, including discussion on digital inclusion and telehealth.

Pricing in Abundance: The Economics of the Manatua Cable presents the Manatua Cable Project, a submarine cable to the Cook Islands and discusses how the proposed wholesale pricing model facilitates increased retail competition.

A Compact 38 GHz millimeter Wave MIMO Antenna Array for 5G Mobile Systems presents the design of a microstrip antenna array.

Over-The-Top Media in Digital Economy and Society 5.0 presents a discussion on how over-the-top media distribution is changing business models in the Indonesian media market.

Energy-Efficient Topology to Enhance the Wireless Sensor Network Lifetime Using Connectivity Control presents a topology control approach to reduce energy utilisation.

The Future of Telecommunications is Open Source

The next step in the evolution of telecommunications has arrived and it is founded on open source and standards. The pace of change in the telecommunications landscape means that competition will be driven by the ability to rapidly develop and deploy solutions that meet customer needs. Legacy systems do not provide this flexibility. Global telecommunications equipment and systems vendors have embarked on open source projects that are community driven to ensure that products are extensible and customer needs are met.

5G has been a key driver of the change in approach taken by the global telecommunications suppliers. Projects including the Open Core Network (OCN), Open Networking Automation Platform (ONAP) (Ericsson) and Open Radio Access Network (O-RAN) have been launched to provide the foundations for ecosystems that are open, flexible and extensible.

The manoeuvring of projects, partnerships and race for acceptance is a central tenet for the global telecommunications equipment and systems vendors, lest they be seen to be isolated and not a participant in the development of the “accepted” ecosystems for 5G, cloud and core networks.

An example has been the adoption of the open source Linux Foundation Tungsten Fabric to provide networking and security across legacy, virtualised and containerised applications. Tungsten Fabric began as the Juniper Networks Open Contrail project.

The future for vendors lies with the provision of highly scalable solutions that embrace and support the underlying open source systems and an overlay ecosystem for application developers.

Vendor platforms for orchestrating and automating the physical and virtual network devices and elements that utilise open source systems and interoperate with other vendor platforms and over-the-top applications through standardised interfaces are a major development that has now become the norm.

The *Journal*, Looking Forward

The *Journal* welcomes papers on telecommunications and the digital economy, including, theory, public policy, reviews and tutorials and case studies.

Technological change is happening at a rapid rate and consumers anticipate that governments and industry keep pace to ensure that the benefits can be fully utilised. The *Journal* is calling for papers on how new technologies will affect Australian telecommunications consumers.

The topics of *International Telecommunications Legislation and Regulations* and *International Mobile Cellular Regulation and Competition* are set to continue for some time, as the opportunity to attract papers from around the globe continues. We encourage papers that reflect on where the global telecommunications market is now, how it got to where it is, and what is going to happen next.

Papers are invited for upcoming issues. With your contributions, the *Journal* will continue to provide readers with exciting and informative papers covering a range of local and international topics. The Editorial Advisory Board also values input from our readership, so please let us know what themes you would like to see in the coming year.

All papers related to telecommunications and the digital economy are welcome and will be considered for publication after the double-blind peer-review process.

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