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Letter from the Editor - January 2024

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The network is a funny thing. But what is it? Few words have so many different definitions. If you were to ask 10 different people, you would likely get 10 different answers. Some you ask may say it's connected things, such as computers or devices. Some may say it's the connectivity layer. Some might talk mobile and RAN, and some may say cloud. Others may go off on quantum, neural, or semantic tangents. Your IT guy may say Ethernet, LAN, or WAN. If you asked your dad over the holidays, he probably droned on about his cable service and Wi-Fi router. Your sister-in-law might talk about people and human connections, and your kid brother, blockchain and crypto. And they all would be right.



The term network is obscure and networks themselves are amorphous. They are comprised of things, connectivity, networking technologies, and even people. But perhaps more important than the definition of the network is what you do with it. And today, networks are becoming an integral part of an advanced combination of technologies to unlock innovation.

From blockchain enabling disaggregated Web3 marketplaces, internets, and data sharing, to connecting smart homes, and unlocking immersive Artificial and Virtual Reality (AR/VR) experiences, the network is the hinge pin that makes it all work - and work it must. After all, immersive experiences don't work if latency or capacity is an issue, and there is no blockchain if you can't connect to the distributed ledger. All the complexity created by the innovation within the network is further compounded by the innovation happening to and on top of it. Cloud technologies, network virtualization, and a constant evolution of network protocols and capabilities only complicate things. Which introduces a whole host of other technologies that can offer some reprieve to us mere mortals trying to keep up, such as advancements in Artificial Intelligence (AI) for software-defined networking use cases and customer self-service technologies to better empower customers.

But perhaps our reliance on the network is what makes it so important. A world without the network is a world without connectivity, the very sinew that is holding this digital world together. The global connectivity that supports economies, supply chains, and access to your online banking, family, marketplaces, and so much more. In fact, the network is so crucial that government organizations are currently contemplating <u>classifying it as critical infrastructure</u>. And today's enterprises and service providers must master their networks to both survive and thrive, which makes this edition of *Pipeline* so significant.

In this issue of *Pipeline*, we explore the many various aspects of network transformation. CloudSmartz kicks things off with ways to win the culture war and build business better by shifting to customer-centric networks, while laying the foundation for advanced automation, AI, and better CX. Moflix tells us why telecom providers may be the key to mass Web3 adoption. Qwilt shows us how open caching can help service providers overcome capacity shortages to provide immersive experiences. NTT provides a peek at all-photonics networking with IOWN and Open APN, and *Pipeline*-contributor Prayson Pate looks at the GPON evolution and lessons learned from fiber deployments. SCTE CableLabs looks at cable network transformation and the intense transformation being created by higher customer expectations and new technologies such as AI, DOCSIS 4.0, distributed networks, and network virtualization. The Broadband Forum provides its perspective on the future of connected homes in conjunction with a recently published report with Omdia. Graphiant explores the complexity of the internet, cloud, and ways hyperscalers are preventing cloud outages. LiveOak Fiber demonstrates how to empower s the customers with connectivity sovereignty, and Bluebird Network illustrates how to increase network resiliency and drive down costs with Access PoPs. All this, plus the latest enterprise and telecom technology news, and more.

We hope you enjoy this and every issue of *Pipeline*,

Scott St. John Managing Editor Pipeline Follow on X | Follow on LinkedIn | Follow Pipeline