Letter from the Editor

By: [Scott St. John - Pipeline](#)

Pervasive mobile connectivity is no longer optional — it's a requirement. In an increasingly digital, always-on world, near-instant access to information and services has become as essential as electricity or running water. Connectivity isn't just a convenience; it is mission-critical infrastructure underpinning how we navigate cities, connect with loved ones, work remotely, consume entertainment, and access essential services 24/7. Its absence carries measurable human and economic consequences.

Nowhere is that clearer than in the cascading failures that occur when connectivity and power collapse. During the [February 2021 Texas power crisis](#), severe winter weather left millions without electricity or heat for days, overwhelming hospitals, disabling water systems, and contributing to hundreds of deaths. Analysts estimate the disaster caused tens of billions of dollars in economic damage, making it one of the costliest infrastructure failures in U.S. history. The event demonstrated how deeply modern society depends on resilient, interconnected networks.

A different but equally disruptive scenario unfolded in May 2021, when [a ransomware attack forced the shutdown of the Colonial Pipeline](#), temporarily halting nearly half of the fuel supply to the U.S. East Coast. The incident triggered fuel shortages, emergency regulatory action, and price spikes across multiple states — a stark reminder that cyberattacks on connected infrastructure can ripple instantly into the physical economy.

These risks are not theoretical or confined to the past. In January 2026, [a nationwide Verizon outage](#) disrupted voice, text, and data services for hundreds of thousands of customers across multiple states, prompting scrutiny from regulators and emergency communications officials. Even short-lived outages at national carriers expose how fragile the digital backbone can be — and how dependent daily life has become on uninterrupted mobile access.

Connectivity is also the cornerstone of trillion-dollar businesses like Amazon, and it fuels the AI ecosystems being built by Google, Meta, Microsoft, Nvidia, and Palantir. Emerging platforms such as OpenAI and SpaceX's satellite networks are scaling around the assumption of ubiquitous, low-latency connectivity. The paradox is unavoidable: failure is not an option, yet failure is inevitable. The only viable strategy is resilience.

It takes droves of highly skilled engineers, operators, and innovators to keep a constantly evolving technological ecosystem running. And when it breaks — and it will — systems must detect, respond, and self-heal automatically to prevent customer impact. Operators must stay ahead of accelerating complexity while defending against a threat landscape that evolves just as quickly as the networks themselves.

They do all of this in service of broader societal progress. To enable new use cases and innovations. They must build in redundancy to absorb inevitable disruption. They must expand connectivity into underserved regions to close the digital divide. They must push infrastructure into cities, buildings, industrial zones, rural terrain, oceans, and orbit. Connectivity is no longer a feature of modern civilization — it is its foundation. And that's what makes this edition of *Pipeline* so important.

In this issue of *Pipeline*, we explore mobile and wireless technology. Ericsson explores the transformation of communication networks into intelligent platforms through 5G Standalone and autonomous networks. InterDigital examines the progression from 5G-Advanced to 6G and AI's role in intelligent networks. Oracle shares insights on unified enterprise orchestration as a key tool to integrate AI-driven communications. Contributing editor Dr. Mark Cummings discusses hardware limitations and innovations for running AI models on mobile devices. SIMO underscores the necessity of multi-carrier backup to mitigate internet outages. Contrivian examines the importance of pervasive multimodal mobile-satellite connectivity. SOLiD details how O-RAN and DAS are overcoming in-building cellular operational challenges. Skymirr advocates an "antenna-first" design approach to overcome IoT deployment challenges, Mobile Ecosystem Forum highlights how the UK's maturing 5G market and push to 6G is revolutionizing mobile messaging, and Mobileum demonstrates how to overcome operational hurdles from roaming and traffic spikes. All this, plus the latest enterprise and telecommunications technology industry news and more.

We hope you enjoy this and every issue,

Scott St. John
Managing Editor
Pipeline

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