

COHERE TECHNOLOGIES

- Founded 2011 in Santa Clara, CA (USA)
- USM software significantly improves spectrum and performance for 4G, 5G and Multi-G mobile networks
- USM software can be integrated into existing base stations (brownfield) or be deployed next to existing base stations through defined interfaces
- Pulsone Technology, powered by Zak-OTFS, is a configurable waveform that is a generalization of all existing 3GPP waveforms
- Patents: 310+ covering 4G, 5G and OTFS
- Major Investors: Vodafone, Koch Investments Group, NEA, Lightspeed, Titanium Ventures (Telstra), Bell Ventures, Intel, VMware (Broadcom) and Juniper Networks (HPE)
- Business Model: Direct or indirect via partners to licensed mobile operators. Partner with cloud service providers, system integrators and OEM vendors

EXECUTIVE TEAM

Ray Dolan

Chairman & CEO
Sonus, Flarion Technologies (Qualcomm)

Shlomo Rakib

Co-founder & CTO
Gainspeed (Nokia), Terayon (Motorola)

Dr. Ronny Hadani

Co-founder & Chief Scientific Officer
Associate Professor - UT Austin

Ram Prasad

COO/CFO
Gainspeed (Nokia), Purfresh Asyst Technologies, Amber Networks (Nokia)

Ronny Haraldsvik

CMO, SVP Business Development & Field Systems Engineering
SpiderCloud (Corning), BelAir (Ericsson), Flarion Technologies (Qualcomm), Shasta Networks (Nortel), Bay Networks (Nortel)

Dr. Anton Monk

SVP Strategy
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HEADQUARTERS

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Company Overview

In 2011 Cohere started to build a proprietary wireless system, Orthogonal Time Frequency Space (OTFS). OTFS demonstrated superior cellular performance in field trials as compared to OFDM (4G and later 5G). However, the company was ahead of its time with a next generation waveform. In 2018 the company changed its focus to bring its innovation around the use of Delay-Doppler-based channel detection, estimation and prediction, as well as precoding software to improve 4G and 5G networks. This innovative technology, called Universal Spectrum Multiplier (USM), is agnostic to any modulation scheme and is fully compliant with 3GPP. The Delay-Doppler channel representation is predictable into the future given that its geometric nature is slow changing. Use of the Delay-Doppler domain enables robust channel estimation and accurate channel prediction into the future. It leverages geometric reciprocity and reduces computation complexity through concise channel representation. The system's cloud-based architecture enables function disaggregation and multi-site network visibility.

USM for 4G, 5G and Multi-G Mobile Networks

USM supports both 4G and 5G networks in FDD and TDD configurations. USM integrates with multiple base station layers to enable FDD MU-MIMO scheduling and beam forming capabilities that is driven by a machine learning capability at the heart of the USM. USM software pairs single user (SU) devices to enable MU-MIMO capacity improvement of existing resources whenever possible. Cohere's USM software works in all available spectrum bands and enables true 4G, 5G and Multi-G co-existence. USM adds significant value to \$1.5 Trillion of spectrum and mobile networks Investments worldwide. Successful USM field and production trials conducted with Telstra (Australia), Vodafone (Spain) and Bell (Canada). In 2026, Cohere announced ECHO—Enhanced Channel Insight with Holographic Observability. ECHO delivers complete, real-time observability of the wireless channel—exposing millions of previously invisible data points every second. This enables operators to see, understand, and act on the physical radio environment with unprecedented precision. ECHO is essential for enabling new network capabilities such as Integrated Sensing and Communications (ISAC) for consumers and national defense, Digital Twin Networks, and improved network performance using AI-RAN.

Pulsone™ Technology Powered by Zak-OTFS for Multi-G Networks

Pulsone enables performance improvements that assure the success of high-speed, multi-satellite connectivity, wireless communications using higher band spectrum, AI-powered networks, and ISAC for critical defense capabilities. Pulsone operates natively in the radar sensing domain, providing a fundamentally new way of interacting with the wireless channel by carrying information in the Delay-Doppler domain. This leads to superior predictability and stability in dynamic environments. Zak-OTFS is a configurable waveform that is a generalization of all existing 3GPP waveforms. It supports 5G (CP-OFDM) and has the ability to evolve into a flexible "mother of waveforms" for 6G. Pulsone Technology allows mobile network operators to use existing 5G hardware initially and transition to enhanced 6G performance through parameter tuning, enabling Pulsone to work with 5G without immediate hardware upgrades – thus giving customers the flexibility for waveform evolution from 5G to 6G based on network and device readiness.

Cohere Technologies is at the forefront of wireless communication as networks transition from 5G (OFDM) to 6G and multi-waveform cloud network models that takes full advantage of Artificial Intelligence (AI) for network automation and network insights. Cohere has been developing OTFS Modulation since 2011 and holds over 300 patents.