cohere technologies

COHERE TECHNOLOGIES

- Founded 2011 in Santa Clara, CA (USA)
- Software based solution significantly improves spectrum and capacity performance for 4G and 5G networks.
- Cohere software can be deployed on any x86-based platform. Cohere can be integrated into existing base stations or be deployed next to existing base stations through defined interfaces. Cohere's software is consistent with the O-RAN architecture and can also be deployed as an xApp within any Telco Cloud
- Patents: 100+ covering 4G, 5G and 6G
- Major Investors: NEA, Lightspeed, Telstra Ventures

EXECUTIVE TEAM

Ray Dolan
Chairman & CEO
Flarion Technologies (Qualcomm)
Board member American Tower

Shlomo Rakib
CTO & co-founder
Co-founder Terayon (Motorola)
and Gainspeed (Nokia)

Dr. Ronny Hadani
Chief Science Officer
Chief Science Officer &
co-founder, Associate
Professor – UT Austin

Ram Prasad
COO
Gainspeed (Nokia)

Ronny Haraldsvik
CMO & Business Development
SpiderCloud (Corning), BelAir
(Ericsson), Flarion
Technologies (Qualcomm)
Shasta Networks (Nortel)

BUSINESS MODEL

- Direct, or indirect via partners, to licensed mobile operators
- Partner with cloud service providers, system integrators and OEM vendors

HEADQUARTERS

2550 Walsh Avenue, Suite 150
Santa Clara, CA 95051 USA

www.cohere-technologies.com

+1 (408) 246-1277

@Cohere_4G_5G

COMPANY OVERVIEW

When Cohere first started the company , it built a proprietary wireless system, Orthogonal Time Frequency Space (OTFS), which demonstrated superior cellular performance in field trials. However, the company was ahead of its time with a "6G" technology and it became impractical for operators to adopt OTFS before implementing 5G. 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 wireless systems. This innovative technology is agnostic to any modulation scheme and is fully compliant with 3GPP.

SPECTRUM MULTIPLIER EFFECT FOR 4G, 5G & 6G

The pioneering work in 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. Additionally, Cohere software takes advantage of existing UE feedback for channel measurement. Cohere's software delivers a significant spectrum multiplier effect for mobile networks in both FDD and TDD with Spatial Multiplexing for any generation network.

Cohere's software-based solution offers significant MU-MIMO benefits with no changes to existing handsets, radios and antennas. Cohere's software works in all available spectrum and enables true 4G and 5G coexistence via a vendor neutral approach to Dynamic Spectrum Sharing (DSS) with Cohere Spatial Multiplexing.

The Delay Doppler channel representation is predictable into the future given that its geometric nature is slow changing. This allows disaggregation of functions which enables Cohere's intelligent cloud Scheduler to reside in the Edge Cloud and creates the foundation for improving cell edge performance via intercell coordination (CoMP).

3GPP REFERENCE MODELS AND COMPLIANCE

Cohere has completed numerous 3GPP simulations and field capture of live network traffic for mobile operators -- confirming scalability and the impact of Cohere's channel detection, estimation and prediction, and precoding software on mobile networks and Cloud RAN. System simulations show material spectrum and capacity improvements compared to current 3GG methods.

DEPLOYMENT OPTIONS FOR 4G, 5G NETWORKS AND CLOUD RAN

Cohere software can be deployed on any x86-based platform. The software can be integrated into existing base stations or be deployed next to existing base stations through defined interfaces. Cohere's solution is consistent with the O-RAN architecture. Within a Telco Cloud, Cohere channel estimation and scheduler can run on near real-time RAN Intelligent Controller (RIC) as an x App

PATENTED INNOVATIONS

Cohere has 100+ patents which cover 4G, 5G and 6G