

MeshNetworks Corporate Background

MeshNetworks, Inc. is revolutionizing wireless networking by delivering proven mobile ad hoc networking and location-aware technologies for PAN, LAN and WAN wireless platforms. The Company's MeshNetworks Enabled Architecture (MEA™) technology provides high performance, low latency and highly survivable networking for fixed, portable and mobile devices. In fact, its core technologies, including MeshNetworks Scalable Routing (MSR™), Quadrature Division Multiple Access (QDMA®) mobile radio platform and its MeshNetworks Positioning System (MPS™), power the world's largest location-aware mobile ad hoc networks.

Corporate Overview

In 1997, DARPA (Defense Advanced Research Projects Agency), the organization that created the Internet, directed the development of a robust tactical mobile communications system for use in the battlefield. After more than \$170 million and six years of R&D invested in development, an ad hoc (mesh) wireless networking solution was created that changed the rules of how wireless networks are architected. MeshNetworks, Inc. was founded to commercialize this technology and holds the exclusive commercial license to the resulting patents and intellectual property.

Since the founding of the Company in March 2000, MeshNetworks has successfully developed and patented a wide range of sophisticated and uniquely functional mobile ad hoc networking, radio modulation and position-location technology. The Company currently has approximately 70 employees, of which 85% have technical degrees, many at masters and PhD levels. MeshNetworks has developed strategic partnerships and alliances with IBM, ITOCHU, Fujitsu, 3Com, ITT Industries, Viasys and other industry leaders. Current investors include ITT Industries, IPO Group, BancBoston, Apax Partners, Redwood Ventures, 3Com Ventures, Itochu and undisclosed strategic investors.

Ad Hoc Networking - Solving the Wireless Range vs Rate Dilemma

The physics of broadband wireless communications stipulates that trade offs have to be made between data rate and radio range for any given transmitter power output. That is, for a specified transmit power, the data rate available (i.e., throughput) will decrease as range from the transmitter increases. This is true for any radio modulation or protocol. So once a radio reaches its maximum allowed power level it must start dropping its data rates to increase its range.

Transmit power is typically limited by regulation or available battery power on the end users device. This is why cellular (centralized) networks offer high data rates close to the cell or access point, but much lower rates as you move even a short distance away. The same physics explains why the downlink data rates (from the high power cell tower to the mobile user) are much higher than the uplink (from the low power mobile user to the cell tower) in cellular systems.

Meshing on the other hand, offers both long end-to-end range and high data rates by hopping through a series of intermediate nodes. Since the distances between each node (i.e., hop) is relatively short compared to the distance between end transmitter and receiver, each hop can be completed at much higher data rates than is possible with a direct connection. This creates an end-to-end connection that supports high uplink *and* downlink data rates over very long distances. In other words, meshing lets you have both higher data rates and longer ranges by making radio physics work for you, not against you. MeshNetworks' Intellectual Property can enhance any personal area, local area and wide area wireless technology.



MeshNetworks ad hoc technology brings a host of other benefits to wireless networks including:

- Improved Spectral Reuse
- Non-Line Of Sight Connectivity
- Unmatched Network Survivability
- Self-forming, Self-Healing, Self-Balancing Networking

Recognized Industry Leader in Mobile Ad Hoc Networking

MeshNetworks is recognized as the leading developer of high performance and scalable mobile ad hoc networking technology. The Company has developed unique Intellectual Property and has patented an extensive portfolio of fundamental ad hoc networking, position-location and other core technologies.

MeshNetworks has successfully licensed its technology, chipset and product reference designs to a number of wireless industry leaders. The Company's line of MEA/QDMA products power some of the world's largest location-aware mobile broadband networks.

Product Offerings for OEMs, VARs and SIs

MeshNetworks offers a wide range of product implementations of its technology through:

MeshConnex – a complete embedded software solution that offers high performance ad hoc networking for standard-based 802.xx radio platforms, as well as proprietary radio technologies. MeshConnex offers a rapid time to market and low-risk approach for adding MEA features to OEM wireless platforms and products.

MeshNetworks Digital ASIC – an integrated routing engine and base band modem solution for QDMA based MEA networks. The ASIC provides a proven and low-cost solution for OEMs desiring the full suite of available MEA technologies - including ad hoc networking, QDMA mobile broadband radio and position-location capabilities.

MEA /QDMA Product Line – a high performance line of mobile broadband and position-location products manufactured by MeshNetworks. These products provide Value Added Resellers and System Integrators with the turnkey hardware & software, tools and support needed to deploy scalable mobile internet systems.

MeshNetworks Management Team

Richard Licursi *President & CEO*
Clifford Chillemi *VP, Secretary, & General Counsel*

Joe Hamilla *VP - Engineering*
Mike Johnson *Chief Science Officer*
Patrick McNair *Chief Financial Officer*

Paul Mueller *VP - Sales*
Rick Rotondo *VP - Technical Marketing*

Peter Stanforth *Chief Technology Officer*
Martin Suter *VP - Business Development*

