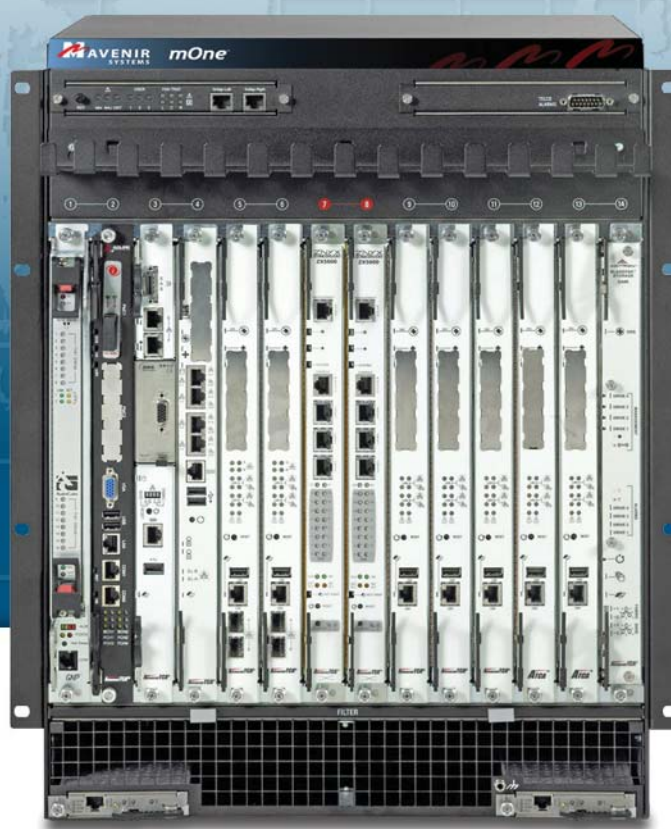# UNICOM Engineering Accelerates Transition to New Intel Microarchitecture for Mavenir Systems' mOne® VoLTE Platform

# Introduction

The task of transitioning hardware to a new microarchitecture can be lengthy and complex. When mobile solutions provider Mavenir Systems decided to upgrade its mOne® hardware platform with the latest Intel microprocessor, the company knew it needed a capable partner to help it manage the redesign and transition process and get the new platform to market quickly, so that Mavenir's mobile operator customers could be among the first to take advantage of its performance benefits.

## The Challenge

Mavenir's mOne enables mobile service providers to deliver voice, video and messaging services seamlessly across existing networks, including VoLTE, RCS and CSFB. Its benefits include increased revenue, reduced network costs, improved subscriber satisfaction, reduced subscriber churn and improved time-to-market.

Mavenir Systems recognized the benefit to upgrading its platform from Intel's previous-generation microprocessors to Intel's new Xeon® Sandy Bridge microarchitecture. A scalable, high-capacity carrier-grade software solution running on industry-standard AdvancedTCA (ATCA) hardware, the mOne Convergence Platform had been on Intel's Westmere microprocessor. By upgrading it to the new Sandy Bridge architecture, Mavenir could increase the platform's capacity and reduce the hardware footprint – two big advantages for telecom service providers.

After looking at a number of different vendors to handle the transition, Mavenir chose UNICOM Engineering, a high-touch systems integration and engineering services vendor that has worked with the company for several years. "Cost considerations required us to evaluate many potential partners," said Terry McCabe, CTO at Mavenir. "We determined that UNICOM Engineering would provide the greatest value. Their engineering expertise and lifecycle support capabilities are world-class, and we knew we could count on them to get the job done. UNICOM Engineering is very tightly coupled with Intel Corp., and that relationship had already proven to be rewarding."
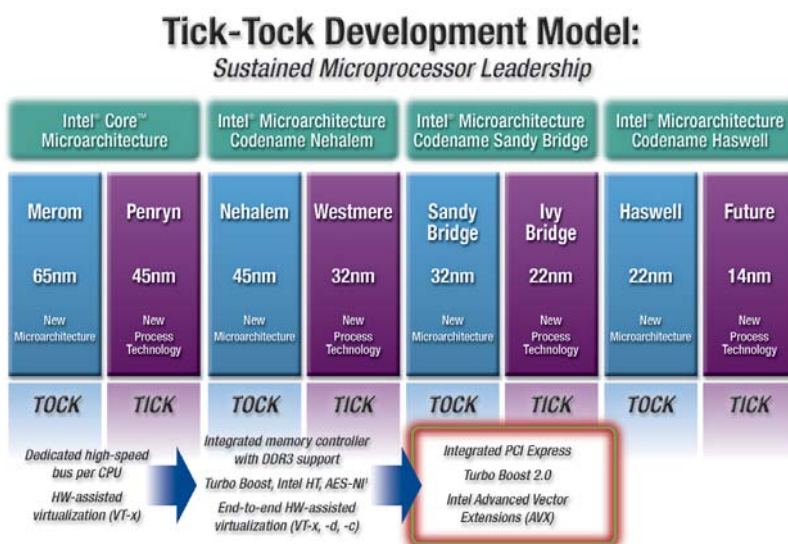


Figure 1

Intel's Tick/Tock Microarchitecture Roadmap

# UNICOM Engineering: Leveraging Vendor Relationships

UNICOM Engineering's hardware and advanced integration expertise, along with its longstanding ties with industry vendors, enabled Mavenir to streamline the process of upgrading its hardware to the new Sandy Bridge platform. UNICOM Engineering began by leveraging its relationship with embedded wireless solutions provider RadiSys, which enabled them to obtain the Intel Sandy Bridge technology early, before it was generally available.

UNICOM Engineering worked with RadiSys to engineer its ATCA-4648 Sandy Bridge processor for Mavenir's mOne Convergence Platform. The ATCA-4648 module is ideal for control plane and server functions for LTE wireless infrastructure, providing higher performance at a lower cost per cycle than the previous generation of single quad-core L5518 processor. Support for hyper-threading in this dual processor SMP design allows the 16 cores to process up to 32 threads simultaneously, delivering greater processing capacity while requiring less hardware.

## Speeding Time to Market

Because UNICOM Engineering was already familiar with Mavenir's technology – UNICOM Engineering had engineered the mOne Convergence Platform leveraging its own A-13000 R2 ATCA platform several years earlier – its engineers had a thorough understanding of its requirements, and thus were able to fast-track the replacement of the Westmere microprocessors with the Sandy Bridge modules. In addition to using UNICOM Engineering's frame-level design and integration capabilities, Mavenir also utilized UNICOM Engineering's regulatory and trade compliance services to accelerate the necessary NEBS and ETSI certifications and international homologation requirements.

As a result of its partnership with UNICOM Engineering, Mavenir was able to bring a performance-optimized product featuring the latest Intel microprocessor technology to market in a matter of weeks rather than months. The improvement in the mOne's Convergence Platform's capacity has enabled Mavenir's mobile operator customers to increase the number of end users they are able to support per node from 7.5 million to 10 million, while reducing the number of hardware platforms they need.

Mavenir has also tapped UNICOM Engineering to serve as a second level of support for the company, so that if something goes wrong with the mOne Convergence Platform at a customer site anywhere in the world, and Mavenir's first-line support is unable to address it, UNICOM Engineering will provide the parts and resources needed.

"UNICOM Engineering helped us to leverage the very best in new technology while driving down the barriers to integration, including solution design and system integration, as well as regulatory testing and international trade compliance," said Terry McCabe, CTO at Mavenir. "UNICOM Engineering's deep integration expertise helped in transitioning the mOne Convergence Platform to the new Sandy Bridge microarchitecture in a matter of weeks."

## About UNICOM Engineering

UNICOM Engineering is a leading provider of server-based application platforms and lifecycle support services for software developers and OEMs worldwide. Through its expertise and comprehensive suite of solution design, system integration, application management, global logistics, support and maintenance services, UNICOM Engineering is redefining application deployment solutions to provide customers with a sustainable competitive advantage. More than a decade of appliance innovation with the ability to provide physical, virtual, and cloud-ready solutions makes UNICOM Engineering one of the most trusted software deployment partners in the industry. Founded in 1997, UNICOM Engineering has facilities in Canton, Massachusetts, Plano, Texas, and Galway, Ireland. For more information, visit **www.unicomengineering.com**.