# Mathworks

## For MathWorks, Ribbon SBCs and Microsoft Lync Add Up to Lower Costs, Better Collaboration

MathWorks is the world's leading developer of technical computing software for engineers and scientists in industry, government, and education. Its MATLAB® and Simulink® products are used throughout the automotive, aerospace, communications, electronics, and industrial automation industries as fundamental tools for research, modeling and simulation, discovery, innovation, and development. Founded in 1984, MathWorks today has 2,800 employees spread out in 26 locations across 15 countries, and more than 5,000 colleges and universities worldwide use MATLAB and Simulink in their teaching and research programs, helping to accelerate discovery in the next generation.

As a software technology company, MathWorks prides itself on using cutting-edge technology solutions to drive business efficiencies and innovation. So when its current IP network vendor's roadmap appeared to be going in a less forward-thinking direction, MathWorks' CIO Simon Hipwell decided it was time for a change. According to Hipwell: "We wanted to push the boundaries and get on with the new world."

MathWorks already had Microsoft solutions in place extensively throughout the organization, so it began investigating Microsoft Lync as an alternative to replace its existing communications platform. Hipwell and his team quickly realized that Lync could provide them with a viable like-for-like swap of the existing system in terms of voice functionality. Yet the company also recognized that additional technology would be required to address the need for interoperability and security, specifically:

- Network security, encryption, and load balancing capabilities

- High availability and high reliability of communications—even in the event of a network failure.

Enabling a smooth migration was also a key concern for Simon Hipwell and his team: as with any change in IT, minimizing the disruption to the day-to-day business was essential. For this reason, the team elected to undertake a phased migration from their legacy systems to the new Lync-based system.

### Before

- Limited collaboration between business units and geographies; lacked ability to share and edit documents online in real time
- Locked into legacy communications system with no roadmap for new technologies like cloud, BYOD, etc.
- On-site PBX provisioning required local IT presence at 26 different geographic sites

### After

- Unified, Lync-based communications support voice, video and data collaboration, including real-time whiteboarding and document editing
- SIP-based platform supports cloud, high-definition voice/video, BYOD and future technologies
- Centralized dial plan management reduces need for local IT presence and frees up 250 IT hours per week for more strategic projects

## Ribbon SBCs Ease the Migration to Unified Communications

The decision to follow a phased migration plan placed added importance on interoperability between legacy equipment and the new system. To facilitate this interoperability, MathWorks selected Ribbon Session Border Controllers (SBCs) to serve as the gateway and intermediary device between the legacy systems and the Lync solution. This enabled MathWorks to add new communications features incrementally, without losing or disrupting any of their existing services.

The Ribbon SBCs also provided seamless integration with Microsoft Active Directory (AD)—the Windows directory service designed to authenticate, authorize, and maintain user information for all devices on a network—something that competitive SBC solutions were unable to do. For an IT team, simple, easy-to-use and comprehensive integration with AD is hugely beneficial. MathWorks estimates that, through the automated provisioning and call routing features of the Ribbon solution, the company has freed up 250 IT staff hours per week for more important projects.

**As Simon Hipwell explains:**
"Anything that integrates with AD makes everything a lot quicker to integrate and move people around. During testing, my engineers said 'That's why we should choose Ribbon.'"

Another criterion for MathWorks was the resiliency and connectivity of the communications across all of its 26 locations. The survivable branch appliance (SBA) functionality of the Ribbon SBCs provided a perfect solution. Even if the wide area network (WAN) goes down, MathWorks' branch offices will not be stranded and disconnected; the Ribbon SBC will manage the intra-branch voice calls and instant messaging sessions, as well as inter-branch communications and voice mail retrieval, by routing them over the public switched telephone network. The ability to maintain communications regardless of network outages is a distinguishing feature of the Ribbon SBCs, and a key reason why MathWorks selected the Ribbon platform over competitive SBCs.

"We're geographically disparate," Hipwell says, "but we now have people doing things they wouldn't normally do. For example, I'm a whiteboarder, and now I can whiteboard with my team in Bangalore while I'm sitting in the UK."
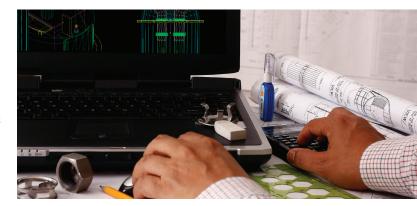
## At MathWorks, Innovation Runs Deep and Reaches Everyone

Today, MathWorks has three main hubs: a pair of Ribbon SBC 2000s at its headquarters in Natick, Massachusetts, and SBC 2000s in both the Cambridge, UK and Tokyo, Japan offices. Ribbon SBC 1000s are providing security, encryption, load balancing and survivable branch appliance functionality in the remaining 23 sites worldwide.

In part because of its confidence in the load-balancing capabilities of the Ribbon solution, MathWorks has also overlaid a Clarity Contact Center solution over the top, in a distributed deployment with some agents at almost every site.

MathWorks, a pioneer in its own industry, is equally pioneering in its attitude toward IT, and was one of the first businesses in the UK to undertake a complete migration to Lync voice. Because of this, the support from Ribbon and systems integrators Techland Group has been instrumental to the project's success.

"Ribbon made the deployment, integration, and migration to Microsoft Lync easy. We were doing things that hadn't been done before, and the pre-sales support from Techland Group and hands-on involvement from Ribbon's engineering team were second to none. All you can hope for is that your suppliers listen to you—and Ribbon did."

## About Ribbon Communications

Ribbon is a company with two decades of leadership in real-time communications. Built on world class technology and intellectual property, Ribbon delivers intelligent, secure, embedded real-time communications for today's world. The company transforms fixed, mobile and enterprise networks from legacy environments to secure IP and cloud-based architectures, enabling highly productive communications for consumers and businesses. With locations in 28 countries around the globe, Ribbon's innovative, market-leading portfolio empowers service providers and enterprises with rapid service creation in a fully virtualized environment. The company's Kandy Communications Platform as a Service (CPaaS) delivers a comprehensive set of advanced embedded communications capabilities that enables this transformation.

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