

Communications Network Transformation for the Enterprise



Communications are the lifeblood of any organization. As such, enterprises are continually looking to improve their communications infrastructure to better connect employees and who they interact with.

Larger enterprises invariably have complex environments that make it difficult to easily upgrade to a single, homogenous environment. The job falls to the IT staff to manage these complex ecosystems until time and budget allow for an upgrade.

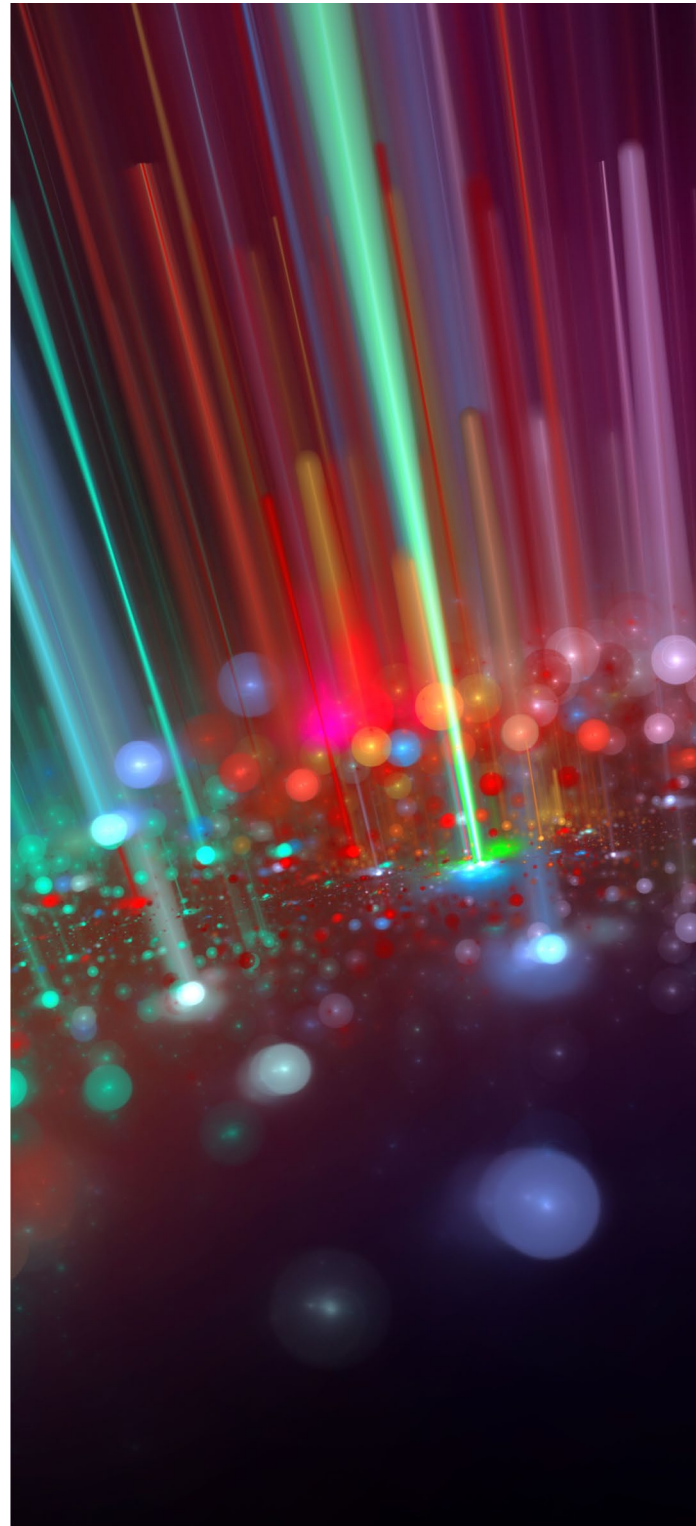
Covid-19 fundamentally altered how and where work gets done. The acceleration in the use of remote working tools happened almost overnight and grew rapidly to where it became the new standard for communication.

Now that IT leaders have had a chance to reflect and make forward looking plans, collaboration-centric tools such as Microsoft Teams and Zoom have largely come out on top. The next challenge is how to get there.

Even though the end state is clear – a singular, global, cloud-based platform for both collaboration and voice communications (both internal and external), roadblocks to the end state include:

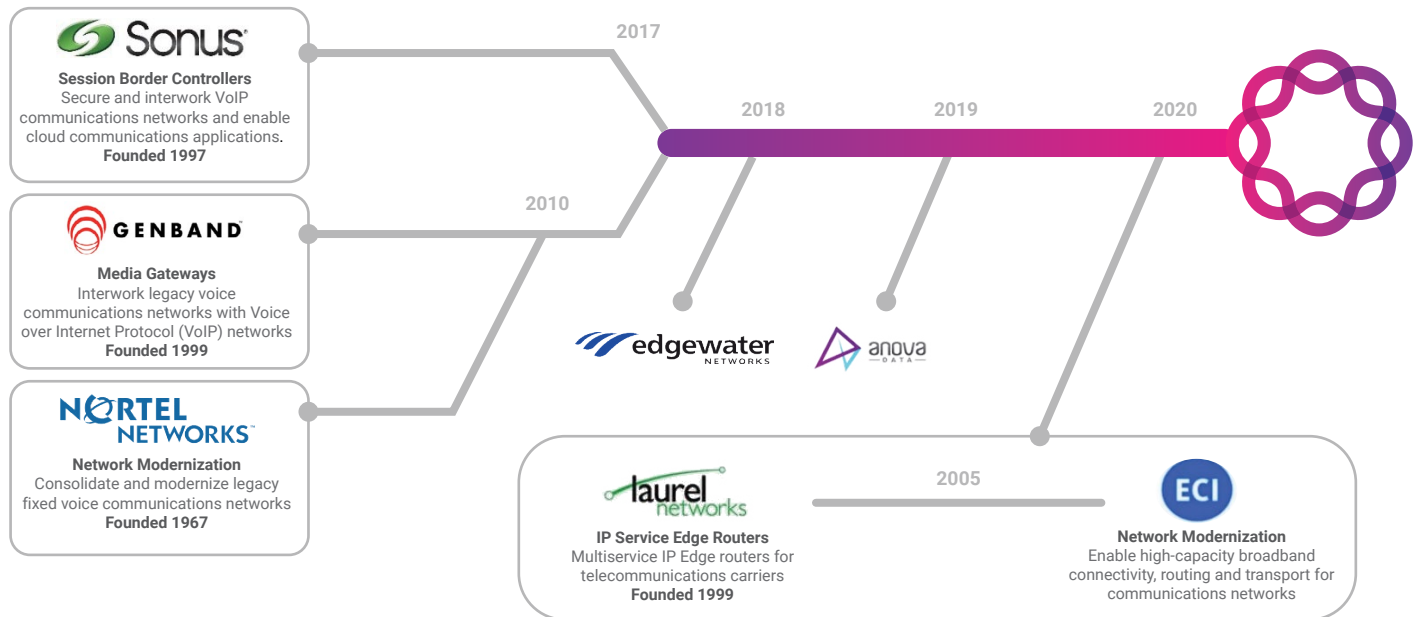
- Multiple disparate systems that must be kept online until retired
- Work groups that have unique requirements (like a contact center)
- Older generation analog connections that are cost-prohibitive to replace
- Preferences of business divisions that want to use something different but still want overall enterprise connectivity
- Recently acquired platforms that aren't ready to be retired

This whitepaper will discuss how to satisfy user needs while getting to that unified, cloud-centric end state.



A Little Background on Ribbon

First, let's start with who we are and where we're headed. For decades, [Ribbon](#) has been in the forefront of delivering carrier-grade communications solutions. While many of the world's largest service providers use Ribbon for call switching, voice security, and optical networking, we also have a large presence in the enterprise.



For instance, Ribbon has developed and supported large-scale call control platforms, used in places like college campuses, hospital networks, and government installations.

Many of these legacy platforms haven't been replaced as there were no cost-effective options that could meet the institutions' security, scale, and resiliency requirements. However, Ribbon is helping with a variety of solutions that, when brought together, help enterprises make the transition from legacy capabilities to a modern cloud infrastructure.



The Ribbon Core

One of the key benefits of the Ribbon core is that it's indifferent to the call control components it manages. An example would be retaining a mixture of solutions – Teams for most workers, a contact center, and a PBX for a separate division – and have them share a dial plan and use the same security parameters.

The key tools in the Ribbon core are:

Policy and Routing

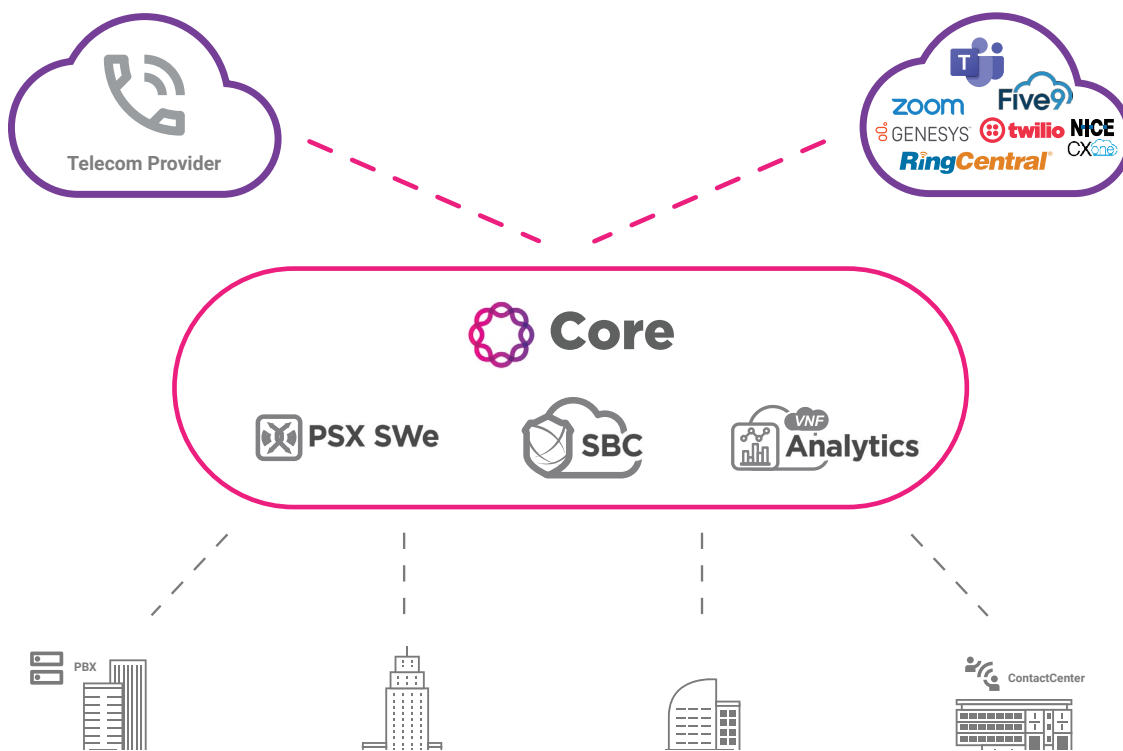
Provides centralized dial plan and user management across any collection of call control platforms.

Session Border Controllers

Provide seamless connectivity to any telecom provider, voice security to encrypt traffic, and media transcoding to ensure legacy voice systems can communicate with each other.

Ribbon Analytics

An enterprise scale platform that uses AI and machine learning to prevent fraud, robocalling, and Telephony Denial of Service (TDoS) attacks.



Another benefit of the Ribbon core solution set is it provides the enterprise flexibility as to the communication platforms it uses - now and in the future. In other words, no vendor lock-in.

With that context in mind, let's review a real-world example from a world-renown university.

Transformation Case Study

A large, California-based educational institution had a complex but typical voice infrastructure. The university serves 150,000 users and has multiple telecom environments – cloud, premises-based IP-PBXs, and older generation hardware. In addition to its campuses, it has a medical system that includes hospitals, clinics, and doctors' offices.

As with any large organization, managing and connecting systems from different vendors, varying generations of technology, and numerous types of call control applications was complicated and expensive. The institution wanted to reduce its costs and complexities while managing a student body that creates many moves, adds, and changes.

When the university approached Ribbon, it was looking for an intelligent “core” campus network that was not tied to any one vendor. Ribbon was able to leverage its [SBCs](#), [analytics](#), and centralized [policy and routing solutions](#) to provide that “agnostic” environment. Microsoft Teams was a central component, but a variety of other platforms would be retained or retired over time.

In the Ribbon core, Ribbon’s infrastructure allows calls to be seamlessly routed from one legacy system to the next, using a common dial plan. Additionally, Ribbon elements integrate with Microsoft Active Directory, making it easier to add new users or revoke services after employee or student departures.

The Ribbon core allows the university to keep all its legacy systems connected while centrally managing policies and connectivity rules. This saves thousands of staff hours annually, reduces the need to retain specialized labor, and minimizes mistakes that could disrupt services.



The Ribbon Core Creates a Connected Community

Ribbon's solutions act as an overlay on top of existing or future communications environments to ensure that all the legacy and new technologies work together. Ribbon's management tools monitor the health and safety of the communications network.

Ribbon's analytics tools use machine learning to look for patterns and watch for bad actors. Ribbon tools can automatically take action to respond to unauthorized network access, cyberattacks, denial of service attacks, fraud attempts, and network quality incidents.

For the university's employees, this automation provides a breadth and depth of engagement that can't be replicated manually. Of course, Ribbon solutions work with connectivity from any telecom provider.

To manage older generation infrastructure, Ribbon's Line Access Gateways enable integration between modern IP systems and a myriad of analog devices

(elevator phones, modems, fax machines, door phones, security devices) that still exist across the campus.

These gateways support the university's copper cabling, even if a device is located multiple miles from the gateway. Ribbon eliminates the cost and complexity of replacing decades worth of legacy infrastructure.

Most importantly, the Ribbon core makes it easier to introduce the latest cloud technologies. With Ribbon, one part of the university can move to Zoom while another can choose Microsoft Teams, and both can be integrated with legacy call control platforms.

Whether the task is to connect IP-PBXs with secure SIP trunks, simplify and secure Microsoft Teams or Zoom deployments, or migrate cloud UC solutions, Ribbon is a one-stop-shop for true digital transformation.



Conclusion

Many enterprises are more anxious than ever to begin their own digital transformation journey. However, the scale and complexity of their organizations often slows their transition. They need a partner that can help them overcome the obstacles, moving from a complex combination of call control platforms to modern cloud-based infrastructure.

Ribbon is already at the core of modern communications in some of the world's largest enterprises. Ribbon has the scale, resiliency, security, and cloud migration choices that enterprises need. We also have system integrator and technology partners who can help with deployment.

Find out how Ribbon can help make the journey to the cloud a successful one.



[Visit us to see additional resources and see how to get in contact with us.](#)

About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G.