2021 Frost & Sullivan Market Leadership Award

The North American VoIP Access and SIP Trunking Industry

Excellence in Best Practices





Congratulations!

Frost & Sullivan is proud to present Verizon with this year's Best Practices Market Leadership Award in the VoIP Access and SIP Trunking Services industry.

Frost & Sullivan's global team of growth pipeline experts continuously identifies and evaluates growth opportunities across multiple industries, technologies, and regions of the world. As part of this on-going effort, we identify companies that consistently develop new growth strategies based on a visionary understanding of the future, and, thus, more effectively address new challenges and opportunities. This approach involves deep strategic deliberation around best practices and the development of core analytics across the entire value chain of specific products and services. Against the backdrop of these analytics, Frost & Sullivan recognizes Verizon for its valuable achievement.

Frost & Sullivan strictly reserves this recognition to companies at the innovation and growth forefront in their respective industries. These companies consolidate or grow their leadership position by continuously innovating and creating new products and solutions that serve ever-evolving customer needs. These companies are also best positioned to expand the market by strategically broadening their product portfolio. Driving innovation and growth is never an easy task. Still, it is one made even more difficult considering today's strategic imperatives, from disruptive technologies and value chain compression to industry convergence and new business models. In this context, Verizon's recognition signifies an even greater accomplishment.

Moreover, this recognition is the result of many individuals (employees, customers, partners, and investors), making critical decisions every single day to support the organization and meaningfully contribute to its future. Frost & Sullivan enthusiastically acknowledges and celebrates their contributions.

Once again, congratulations on your accomplishments, and we wish you great success in the future.

Sincerely,

Darrell Huntsman

Chief Executive Officer

Frost & Sullivan

Strategic Imperatives

Frost & Sullivan identifies three key strategic imperatives that impact the connected work industry: disruptive technologies, transformative Mega Trends, and new business models. Every company that is competing in the connected work space is obligated to address these imperatives proactively; failing to do so will almost certainly lead to stagnation or decline. Successful companies overcome the challenges posed by these imperatives and leverage them to drive innovation and growth. Frost & Sullivan's recognition of Verizon is a reflection of how well it is performing against the backdrop of these imperatives.

DISRUPTIVE TRANSFORMATIVE NEW BUSINESS <u>SI8</u> **TECHNOLOGIES MODELS MEGA TRENDS** A larger elderly population Rapid technology and the maturing of digital development, increasing Technology trends such as the native millennial and Gen Z digitization, and the changing IoT, AI, robotics, AR/VR, APIs, populations will influence needs of the dominant Gen Z programmable future work arrangements. workforce will push new communications, and cloud Factors such as flexible technology use cases in delivery mechanisms such as schedules and the ability to established businesses and anything-as-a-service are work remotely are important allow new types of disruptive reshaping the future of work criteria for millennials. businesses and business in a post-COVID-19 world. For Gen Z, independence, models to flourish. Sensors and AI will enhance flexibility, and financial Continued advancements in human-machine interactions, security will be important as cloud services, the IoT, video, while software-based they enter the workforce. mobility, robotics, AI, and meetings and collaboration New technologies and work solutions will reduce other digital technologies will models will help create value create new innovation communication constraints and provide a sense of frontiers for technology between remote locations. instant gratification for Gen Z developers. and millennials. Telecommuting has grown by Communications and 115% in 10 years. collaboration technology It is imperative for developers and service By 2021, 25 to 30% of communications technology providers can address the developers and service knowledge and task workers will be working from home large post-pandemic providers to focus on feature differentiation and platform several days a week. Around opportunity to enhance productivity for remote and 75% of the office workers, reliability, security, scalability, especially in large hybrid workers. and extensibility in the next 5corporations, could move to An untapped growth 10 years. remote work by 2030. opportunity exists among Programmable Immediately following the frontline workers in various communications and pandemic, businesses will industries who need embedded unified communication (i.e., voice, consider flexible work convenient access to communication in missionvideo, and messaging features mechanisms that will allow critical business applications integrated with IoT devices, as them to scale the workforce

quickly.

In the next 5-10 years, micro

jobs among the elderly are

likely to become the norm.

well as business and vertical

success in the next 10 years.

software) will determine

other and with the corporate

and collaboration tools to

stay connected with each

office.

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria for each nominated company. Verizon excels in many of the criteria in the VoIP Access and SIP Trunking space.

AWARD CRITERIA	
Growth Strategy Excellence	Technology Leverage
Implementation Excellence	Price/Performance Value
Brand Strength	Customer Purchase Experience
Product Quality	Customer Ownership Experience
Product Differentiation	Customer Service Experience

Product Differentiation (Ensure heading is complete)

Verizon stands out among North American voice over Internet Protocol (VoIP) access and Session

"Verizon differentiates its VoIP and SIP trunking solutions by being ready to match its solutions to exacting customer requirements. The provider understands the inherent flexibility available with IP-based communications services, and over the last fifteen years, has repeatedly leveraged it to full effect to the delight of its customers."

- Michael Brandenburg, Senior Industry Analyst, Connected Work Initiation Protocol (SIP) trunking services providers with its ability to pioneer innovative solutions and consistently push new capabilities to market to enhance customer value. The provider also impresses with its broad range of solutions tailored for different customer types in terms of size, budget and technology requirements.

Verizon launched its VoIP access and SIP trunking services long before most of its competitors. While many of those early solutions required businesses to centralize their UC platforms in order to support SIP trunking, Verizon created flexible deployment options

to allow for distributed environments across enterprise sites. Distributed enterprise deployments evolved into Verizon's Burstable Enterprise Shared Trunking (BEST), which enabled customers to treat their telecommunications resources as a collective pool, sharing idle resources among all of their

locations, as well as consolidating voice services under a single bill. Verizon then followed up with BEST+, enabling customers to boost their total voice capacity in order to meet unexpected surges in overall voice traffic.

For customers that do not require the full capabilities of Verizon's IP Trunking service, the provider also offers a VoIP Essential Feature package. VoIP Essential Feature offers many of Verizon's most popular capabilities, including BEST and on-net calling, but scales back on some of the enterprise-class features in order to offer a lower overall cost to the customer. This more economical solution brings Verizon's vast network and services within reach of the particularly cost-conscious business. Similarly, Verizon allows its IP Trunking customers to choose between usage-based billing at per-minute rates or capacity-based pricing tied to the number of concurrent call paths, which enables predictable monthly billing. Overall, Verizon differentiates from competitors by being ready to match its solutions to exacting customer requirements. The provider understands the inherent flexibility available with IP-based communications services, and over the last fifteen years, has repeatedly leveraged it to full effect to the delight of its customers.

"In response to the 2020 pandemic, many large enterprises embraced Microsoft Teams as a collaboration and meetings platform to support dramatic shifts to work from home and distributed workforce strategies. Verizon was particularly well positioned in supporting these customers incorporate native voice calling within Teams."

- Michael Brandenburg, Senior Industry Analyst, Connected Work

Implementation Excellence

Verizon is one of the few service providers in the North American market with a full line of wireless, wireline, and IP-based services and networks for both businesses and consumers and has consistently leveraged its abundant resources to great effect. While a number of Verizon's competitors are unable or unwilling to link their wired and wireless networks, Verizon strives to create synergies across all its networks, treating all its services as a unified set of resources to meet exact business requirements.

For example, Verizon has long offered the VoIP IP Enterprise Routing (VIPER) feature, which allows "onnet" rates by keeping voice traffic among customer organizations on Verizon's network, without touching the public switched telephone network (PSTN). While Verizon's competitors offer intracompany on-net calling, only Verizon extends this reduced rate for calls among subscribers. In another example, by working through partner programs such as Cisco Webex Cloud Connected Audio and Microsoft Direct Connect Audio Conferencing, Verizon can incorporate a customer's IP Trunking to serve as the audio dial-in function of online meetings, making those calls on net as well. Further extending its synergies, Verizon offers Wireless Connected VoIP, whereby no usage rate is applied to SIP trunking calls made to Verizon Wireless users from US locations.

Equally important, Verizon is pushing the bounds of where it can deliver its VoIP access and SIP trunking services and is able to provide a high-quality VoIP connection both on and off its global network. In addition to its traditional dedicated multi-protocol label switching (MPLS) or wired access links, Verizon offers SIP trunking services across its wireless Long-term Evolution (LTE) network, its fiber optic broadband Fios network for home and small business users, as well as over software-defined wide-area networks (SD-WAN) and third-party broadband access. Looking forward, Verizon plans to validate IP trunking across both its private and broadband 5G wireless networks, offering another connectivity option for its customers.

Each of these access options opens up a wealth of opportunities and use case. For example, Verizon offers VoIP services across its wireless LTE network with full quality of service (QoS) support. For Verizon's customers, the use cases for SIP trunking services deployed across LTE are seemingly endless. With support for up to a dozen SIP trunks, businesses have a new option to provide wireless backup to support mission-critical voice platforms. VoIP with Wireless LTE Access can also accelerate deployments by offering temporary or primary access to remote business locations. This innovative capability empowers businesses to create new operational models. Pop-up or seasonal sites can be quickly spun up or down with the full suite of voice services readily available. Highly mobile applications, such as construction sites or emergency response teams, can now take advantage of business-grade solutions instead of making do with the limited features of consumer mobile services and cell phones.

Support for SIP trunking over Fios or over the top of third-party broadband services enables Verizon to attract smaller customers that may want to leverage the capabilities of IP-based trunking services, but are not ready to commit to an often-costly MPLS network. By layering managed SD-WAN on top of the broadband link, customers are assured of a QoS support for their mission-critical voice communications. These use cases and synergies will only become stronger and deployed on a larger scale as Verizon's wireless 5G network becomes ubiquitous.

Customer Ownership Experience

With the breadth and depth of its VoIP services, as well as its capacity to deliver these services in a way that best meets unique customer requirements Verizon enables excellent customer ownership experiences. By leveraging standards-based SIP technologies, the company's platform supports flexible interoperability with other SIP-based platforms and devices. Verizon Business' IP Integrated Access (IPIA) services are marketed as analog or TDM trunking replacement alternatives. Now making up less than half of Verizon Business' VoIP deployments these two services offer businesses with legacy key systems or time division multiplexing (TDM) private branch exchanges (PBXs) the ability to leverage next-generation VoIP services without an expensive forklift of their telephony solutions.

Verizon Business also offers IP Trunking, specifically catering to businesses deploying fully IP-based communications. This service now constitutes just over half of Verizon Business' services and continues to experience very high growth rates as businesses increasingly migrate their premises-based communications solutions to IP-based platforms. Customers migrating to cloud-based communications like Microsoft Teams can continue to leverage Verizon's IP trunking services, taking advantage of cost-effective pricing, high quality of service, and advanced feature sets.

Verizon offers additional capabilities to extend the value of its SIP trunking services; those include: shared trunking through BEST; bursting capabilities with BEST+; enterprise-level concurrent calls and onnet routing; and multi-site, multi-country deployment options. Customers are given access to detailed traffic reports as well as a centralized management dashboard, allowing customers to leverage a fine grain of control over their deployed services.

Technology Leverage

To accelerate deployments and ease the investment costs of SIP trunking migrations, Verizon's network services team offers several flavors of managed session border controllers as a service (SBCaaS). With SBCaaS, Verizon customers can leverage Ribbon SBCs deployed in Verizon's data centers, rather than on their own premises. With expert teams skilled in the Ribbon products, SBCaaS combined with IP Trunking delivers an optimized and integrated SIP trunking deployment experience for customers of any size or scale. By leveraging the full capabilities of its network and service offerings, Verizon sets itself apart from competitors in meeting the varying needs of its customers.

In response to the 2020 pandemic, many large enterprises embraced Microsoft Teams as a collaboration and meetings platform to support dramatic shifts to work from home and distributed workforce strategies. Verizon was particularly well positioned to enable these customers to incorporate native voice calling within Teams. By leveraging its IP Trunking and managed SBCaaS together, Verizon is able to provide Microsoft Teams Direct Routing integration with Microsoft's cloud-based Phone System, without the need for customers to invest and deploy on-premises infrastructure.

In 2021, Verizon took its partnership with Microsoft one step further by becoming an initial-launch partner for Operator Connect. Operator Connect offers customers a direct and highly automated link between Verizon and Microsoft to deliver PSTN voice services into the Microsoft Teams and Phone System platform. Once configured for a Verizon customer, a company's telephone numbers can be provisioned and administered directly from the Microsoft Teams admin portal, completely abstracting the challenges of number and SIP trunking management for IT staff. Verizon's ongoing innovation strategy around its VoIP access and SIP trunking solutions enabled the provider to be among the first global partners to support Operator Connect, while none of its North American competitors were able to move quickly enough to be a part of the initial launch.

Brand Equity

Verizon is a well-established brand among both business decision makers and consumers. Verizon is among the leaders in the North American market for residential and business wireless services, with the Verizon brand front and center as the company evangelizes the shift to 5G networks in print, TV and digital campaigns. In addition, Verizon has a rich history and a strong track record in the wireline telecommunications services market. North American businesses as well as organizations around the world trust the Verizon brand as they associate it with service quality and reliability and provider stability.

Furthermore, the incumbent carrier still retains a significant customer base using TDM-based legacy trunking services, placing Verizon on the short list for many businesses looking to move to IP-based communications solutions. This strong position is reinforced by the myriad of successful VoIP access and SIP trunking deployments Verizon has already achieved. Businesses trust Verizon and in turn, trust that the company can deliver IP-based communications services with strong uptime and minimal disruption.

Conclusion

Verizon stands tall after more than a decade of IP trunking innovation and success. Verizon continually reads the market and quickly adapts its solutions to provide the perfect fit to customer needs. With a commitment to innovation at the heart of its competitive strategy, Verizon's voice services are well positioned to support enterprise customers evolving their communications services.

With its strong overall performance, Verizon earns Frost & Sullivan's 2021 Market Leadership Award.

What You Need to Know about the Market Leadership Recognition

Frost & Sullivan's Market Leadership Award recognizes the company that achieved the greatest market share resulting from outstanding performance, products, and services.

Best Practices Award Analysis

For the Market Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Growth Strategy Excellence: Company demonstrates an ability to consistently identify, prioritize, and pursue emerging growth opportunities

Implementation Excellence: Company processes support efficient and consistent implementation of tactics designed to support the strategy

Brand Strength: Company is respected, recognized, and remembered

Product Quality: Products or services receive high marks for performance, functionality, and reliability at every stage of the life cycle

Product Differentiation: Products or services carve out a market niche based on price, quality, or uniqueness (or some combination of the three) that other companies cannot easily replicate

Technology Leverage: Company is committed to incorporating leading-edge technologies into product offerings to enhance product performance and value

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers are proud to own the company's product or service, and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and of high quality

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create on-going growth opportunities and strategies for our clients is fuelled by the Innovation Generator $^{\text{TM}}$. Learn more.

Key Impacts:

- Growth Pipeline: Continuous flow of Growth opportunities
- Growth Strategies: Proven Best Practices
- Innovation Culture: Optimized Customer Experience
- ROI & Margin: Implementation Excellence
- Transformational Growth: Industry Leadership



The Innovation Generator™

Our six analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)



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