2017 United States Business Metro Carrier Ethernet Services Market Leadership Award
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Background and Company Performance

Industry Overview

Carrier Ethernet has established itself as the de facto wide area network (WAN) connectivity service among businesses of all sizes due to the benefits it offers: scalability, reliability, and cost efficient bandwidth. U.S. Business Ethernet market revenues exceeded $5.9 billion in 2016.

Demand for Ethernet services is sustained by continued market migration from time division multiplexing (TDM) private lines (T1/T3/SONET) to Ethernet for secure data center connectivity, branch site connectivity, support converged enterprise applications, and cloud connectivity. However, the year-over-year (YoY) growth rates for the total business Ethernet market is slowing down, as market adoption is beginning to mature. While Ethernet services are far from being ubiquitous, YoY growth rates are expected to be in single digits as opposed to higher double digits in the past. While the demand for new circuits is slowing down, service providers report witnessing increased speeds on existing ports from bandwidth hungry enterprise users.

SDN and NFV technologies are beginning to influence Ethernet services. Leading network service providers (NSPs) have deployed SDN to offer dynamic bandwidth capacities on their Ethernet networks. While NFV-based services are new, virtual network services—virtual firewall, virtual WAN optimization, and virtual router—offered with Ethernet are slowly emerging in the market.

Market Leadership of AT&T

Growth Strategy Excellence

AT&T continues to be the market leader in the U.S. Business Metro Carrier Ethernet Services Market. The company has consistently ranked #1 in Frost & Sullivan’s market share analysis of the retail Ethernet market since 2009. In 2016, AT&T controlled nearly 25% of the metro market share, and 19% of the share in long haul segment.

AT&T Switched Ethernet Service (ASE) is the company’s flagship Ethernet product, and is available in the 21 states where AT&T is an incumbent local exchange carrier (ILEC) and in 8 other states plus Washington DC. AT&T continues to lead through a combination of deep network footprint, high-performance service level agreements (SLAs), and embracing new technologies to launch innovative solutions in the market.

Implementation Excellence

AT&T has been a huge proponent of TDM to IP migration, considering the ILECs have the greatest penetration of TDM circuits in metro networks. In 2015, AT&T greatly expanded its Ethernet capabilities to speed-up the migration process to Ethernet with plans to replace a majority of its TDM infrastructure with Ethernet by 2020.

Another key initiative the company undertook in 2015 and 2016 was the launch of the AT&T Switched Ethernet (ASE) interLATA (Local Access and Transport Area) product. ASE interLATA enables AT&T to sell metro and intercity links requested by a customer, as one
product, as long as ASE is available at both ends of a customer location. Earlier, the company had to sell ASE within the confines of a LATA and sell its OPT-E-WAN product for long haul circuits. By offering a single product that combines local and long haul links, and comes with one contract, one bill, one customer service experience, AT&T is able to compete more effectively in the market where cable MSOs are becoming increasingly competitive. Since cables MSOs do not have LATA restrictions, they were able to offer more seamless products in the local and long haul segments. The ASE interLATA product is a commendable step by AT&T as it simplifies the network buying process for customers and makes itself more competitive.

**Technology Leverage**

AT&T has been a front-runner in embracing and deploying SDN and NFV technologies at a large scale. AT&T Switched Ethernet on Demand capability, based on SDN, is currently operational across its 21 state network footprint, in nearly 170 cities. The Network on Demand offering comes backed by all the business benefits of SDN and NFV-based network solutions—faster network provisioning, granular bandwidth, and deep security features.

AT&T Ethernet Network on Demand enables customers in turning up sites in days (as opposed to months in the past), changing bandwidth in near real time, and spinning up firewalls in minutes, thus providing users unprecedented capabilities to make their businesses more agile and competitive. As enterprise adoption of Ethernet to connect to cloud-based applications increases, customers are looking for dynamic bandwidth capacity with usage-based billing on Ethernet networks, and AT&T’s Ethernet network delivers true bandwidth on demand.

**Brand Strength**

AT&T is the leading communication service provider in the U.S. markets with a broad range of solution offerings and deep expertise in the network services space. The company has received recognition for its excellence by several industry publications. The most recent recognition includes winning J.D. Powers 2016 Business Wireline Satisfaction Study, and being named the World’s Most Admired Telecommunications Company by Fortune Magazine for the third year in a row.

**Customer Purchase Experience**

Data center virtualization and cloud computing have altered the enterprise IT environment in an irreversible manner. The traditional static, hardware-centric approach to WAN hinders enterprise IT transformation by being complex and time consuming. SDN and NFV technologies are making it possible to achieve the agility and simplicity required to make enterprise WANs dynamic. AT&T’s network modernization efforts are far ahead of other providers, with the company launching three on-demand services—switched Ethernet on Demand, AT&T Dedicated Internet (ADI) on Demand, and FlexWare (network functions on demand)—in the past 3 years.

AT&T’s on-demand services provide customers with productivity, efficiency, and cost benefits as they deploy WAN services. The company’s leadership in bringing the best of
breed, future-proofed services creates a positive customer purchase experience for business customers.

**Conclusion**

AT&T continues to remain the market leader in the Business Metro Carrier Ethernet services market by capturing the highest market share yet again in 2016. In recognition of the company’s efforts, as described in the aforementioned sections, Frost & Sullivan is proud to bestow the 2017 Market Leadership Award to AT&T.
Significance of Market Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company, and then making the decision to return time and again. Loyal customers become brand advocates; brand advocates recruit new customers; the company grows; and then it attains market leadership. To achieve and maintain market leadership, an organization must strive to be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition. This three-fold approach to delivering market leadership is explored further below.

Understanding Market Leadership

As discussed on the previous page, driving demand, strengthening the brand, and differentiating from the competition all play a critical role in a company’s path to market leadership. This three-fold focus, however, is only the beginning of the journey and must be complemented by an equally rigorous focus on the customer experience. Best-practice organizations, therefore, commit to the customer at each stage of the buying cycle and continue to nurture the relationship once the customer has made a purchase. In this way, they build a loyal, ever-growing customer base and methodically add to their market share over time.
Key Performance Criteria

For the Market Leadership Award, we focused on specific criteria to determine the areas of performance excellence that led to the company’s leadership position. The criteria we considered include (although not limited to) the following:

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<tr>
<th>Criterion</th>
<th>Requirement</th>
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<tr>
<td>Growth Strategy Excellence</td>
<td>Demonstrated ability to consistently identify, prioritize, and pursue emerging growth opportunities</td>
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<td>Implementation Excellence</td>
<td>Processes support the efficient and consistent implementation of tactics designed to support the strategy</td>
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<tr>
<td>Brand Strength</td>
<td>The possession of a brand that is respected, recognized, and remembered</td>
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<tr>
<td>Product Quality</td>
<td>The product or service receives high marks for performance, functionality, and reliability at every stage of the life cycle</td>
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<td>Product Differentiation</td>
<td>The product or service has carved out a market niche, whether based on price, quality, or uniqueness of offering (or some combination of the three) that another company cannot easily duplicate</td>
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<td>Technology Leverage</td>
<td>Demonstrated commitment to incorporating leading-edge technologies into product offerings, for greater product performance and value</td>
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<tr>
<td>Price/Performance Value</td>
<td>Products or services offer the best value for the price, compared to similar offerings in the market</td>
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<td>Customer Purchase Experience</td>
<td>Customers feel they are buying the most optimal solution that addresses both their unique needs and their unique constraints</td>
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<tr>
<td>Customer Ownership Experience</td>
<td>Customers are proud to own the company’s product or service, and have a positive experience throughout the life of the product or service</td>
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<tr>
<td>Customer Service Experience</td>
<td>Customer service is accessible, fast, stress-free, and of high quality</td>
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## Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Our analyst team strives to follow a 10-step process (illustrated below) to evaluate Award candidates and assess their fit with our best practice criteria. The reputation and integrity of our Awards are based on close adherence to this process.

<table>
<thead>
<tr>
<th>STEP</th>
<th>OBJECTIVE</th>
<th>KEY ACTIVITIES</th>
<th>OUTPUT</th>
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</table>
| 1 Monitor, target, and screen | Identify Award recipient candidates from around the globe | • Conduct in-depth industry research  
• Identify emerging sectors  
• Scan multiple geographies | Pipeline of candidates who potentially meet all best-practice criteria |
| 2 Perform 360-degree research | Perform comprehensive, 360-degree research on all candidates in the pipeline | • Interview thought leaders and industry practitioners  
• Assess candidates’ fit with best-practice criteria  
• Rank all candidates | Matrix positioning of all candidates’ performance relative to one another |
| 3 Invite thought leadership in best practices | Perform in-depth examination of all candidates | • Confirm best-practice criteria  
• Examine eligibility of all candidates  
• Identify any information gaps | Detailed profiles of all ranked candidates |
| 4 Initiate research director review | Conduct an unbiased evaluation of all candidate profiles | • Brainstorm ranking options  
• Invite multiple perspectives on candidates’ performance  
• Update candidate profiles | Final prioritization of all eligible candidates and companion best-practice positioning paper |
| 5 Assemble panel of industry experts | Present findings to an expert panel of industry thought leaders | • Share findings  
• Strengthen cases for candidate eligibility  
• Prioritize candidates | Refined list of prioritized Award candidates |
| 6 Conduct global industry review | Build consensus on Award candidates’ eligibility | • Hold global team meeting to review all candidates  
• Pressure-test fit with criteria  
• Confirm inclusion of all eligible candidates | Final list of eligible Award candidates, representing success stories worldwide |
| 7 Perform quality check | Develop official Award consideration materials | • Perform final performance benchmarking activities  
• Write nominations  
• Perform quality review | High-quality, accurate, and creative presentation of nominees’ successes |
| 8 Reconnect with panel of industry experts | Finalize the selection of the best-practice Award recipient | • Review analysis with panel  
• Build consensus  
• Select recipient | Decision on which company performs best against all best-practice criteria |
| 9 Communicate recognition | Inform Award recipient of Award recognition | • Present Award to the CEO  
• Inspire the organization for continued success  
• Celebrate the recipient’s performance | Announcement of Award and plan for how recipient can use the Award to enhance the brand |
| 10 Take strategic action | Upon licensing, company is able to share Award news with stakeholders and customers | • Coordinate media outreach  
• Design a marketing plan  
• Assess Award’s role in future strategic planning | Widespread awareness of recipient’s Award status among investors, media personnel, and employees |
The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.