Ethernet Services Carrier Scorecard: North America

EXECUTIVE SUMMARY

It's generally a good sign for a seller in any market if its customers' biggest complaint is that they would love to buy its products, but are having trouble getting them. Such is the case with the Ethernet services market: Enterprise professionals surveyed last year by Heavy Reading identified "limited availability" as the number one obstacle that might prevent them from using Ethernet.

Ethernet is on its way to becoming the universal telecom service for enterprises – able to be efficiently delivered and supported by large and small carriers alike at attractive price points for the entire range of customers who might ever need high-bandwidth solutions. The momentum in the market is unmistakable: As of late March 2005, 122 operators were offering at least 589 Ethernet connectivity and Ethernet-access-based services and applications in North America, and more carriers are planning to roll out services and applications to a larger number of customers and enterprise sites over the next 18 months. At the same time, many service providers and equipment vendors are accelerating their efforts to ensure that Ethernet services match or exceed the performance characteristics of legacy Frame Relay, ATM, and Sonet-based private line services – which will ultimately help accelerate the rise of Ethernet, at the expense of the other services.

Ethernet Services Carrier Scorecard: North America updates and expands Heavy Reading’s prior coverage of the fast-growing Ethernet services market. This latest report focuses on the drivers behind the shift toward carrier-grade Ethernet services, expanding coverage of the specific Ethernet services now being provided by individual carriers, and sharing more extensive and direct feedback from a larger number of profiled Ethernet service providers.

The report delivers a full accounting of Ethernet services now available from more than 120 network operators in the U.S. and Canada, analyzing services by the following criteria:

- General type (connectivity services or access-based services and applications enabled over Ethernet)
- Specific type (Ethernet private lines, Ethernet private LANs, Ethernet virtual private lines, Ethernet virtual private LANs, business network services, or business applications)
- Geographic reach (intra-metro or inter-metro service)

The report also provides an in-depth examination of the Ethernet strategies, revenue momentum, service footprint, service pricing, service portfolios, and plans of these 25 major operators:

- AboveNet Inc. (OTC: ABVT)
- AT&T Corp. (NYSE: T)
- BellSouth Corp. (NYSE: BLS)
- Broadwing Corp. (Nasdaq: BWNG)
- Cablevision Systems Corp. (NYSE: CVC)
- Cogent Communications Group Inc. (Amex: COI)
Key Findings

Network operators in North America continue to launch new Ethernet services at a rapid pace. Of the approximately 180 North American service providers we examined, we found 122 operators that sell at least 589 Ethernet connectivity and Ethernet-access based services and applications. We identified specific service offerings of 109 of these carriers. This information is presented in table format in the report.

Ethernet private line, Ethernet virtual private line, and Ethernet virtual private LAN services are the most prevalent forms of carrier Ethernet services now being marketed in North America. EPL, EVPL, and EVPLAN services are each provided by 45 percent or more of the 109 Ethernet carriers we’ve identified and 60 percent or more of the 25 Ethernet carriers profiled in this report. Heavy Reading’s discussions with operators and earlier survey data indicate that all of these services – especially EVPLANs – will grow in number in the coming years.

E-Lines account for 65 percent of all North American connectivity services. This percentage is high, in part, because EPLs and EVPLs are the easiest services to roll out, and they consequently made up the bulk of Ethernet services that first hit the carrier market.

Service providers are increasingly turning their attention to inter-metro Ethernet services. Slightly less than two-thirds of all connectivity services we’ve identified are intra-metro. This proportion is fairly steady across all the categories, indicating that Ethernet services remain primarily a localized offering. However, several carriers are now ramping up inter-metro service portfolios.

Many of the critical pieces are falling into place not just to put the Ethernet services market on a double-digit growth trajectory, but also to reshape the entire data services industry. When you combine the fact that billions of dollars are at stake with the potential reality that – in the words of one established operator – “Legacy services offer no compelling value” and represent “a diminished endgame” for carriers themselves, you can see why service providers that depend on ATM, Frame Relay, and Sonet-based private line services have reason to worry about the future of their businesses.
Report Scope and Structure

This report delivers the most comprehensive examination of the North American Ethernet services landscape ever published. It is based on interviews and other input from dozens of carriers, conversations with leading equipment vendors, and additional primary research. It complements and builds on findings in earlier Heavy Reading reports and adds greater depth in terms of which carriers are offering what solutions, how quickly services are gaining a foothold in the market, how services are being priced, and what key operators are planning to do in the future.

Service matrices pinpoint exactly which types of Ethernet services are being offered by each carrier, as well as the current market status of those services.

Excerpt 1: MCI Ethernet Service Portfolio

<table>
<thead>
<tr>
<th>SUPPORT/MARKETING</th>
<th>SUPPORT/LIMITED MARKETING</th>
<th>PLANNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHERNET CONNECTIVITY SERVICES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ETHERNET LINE (E-LINE) SERVICE</td>
<td>ETHERNET LAN (E-LAN) SERVICES</td>
<td></td>
</tr>
<tr>
<td>PRIVATE LINE</td>
<td>VIRTUAL PRIVATE LINE</td>
<td>PRIVATE LAN</td>
</tr>
<tr>
<td>MAN</td>
<td>MAN</td>
<td>WAN</td>
</tr>
</tbody>
</table>

Source: Heavy Reading

In addition to cataloging all of the Ethernet services now available in North America, the report uses original survey data and other research to analyze the key drivers that are propelling growth in Ethernet service deployments, including carrier business imperatives, technology developments, and changes in demand from enterprise and consumer end users.

Excerpt 2: Enterprise Survey on the Importance of Ethernet Service Features

Source: Heavy Reading
The report explores current and projected Ethernet service developments in the context of a unique Ethernet Services Framework developed by Heavy Reading. This framework provides an invaluable method for cataloging and analyzing each network operator’s Ethernet service portfolio and rollout plans.

Excerpt 3: Ethernet Services Framework

<table>
<thead>
<tr>
<th>Source: Heavy Reading</th>
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</thead>
<tbody>
<tr>
<td>This report’s structure is as follows:</td>
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**Section II** examines macro-level drivers generating momentum for Ethernet service adoption and then explores in greater detail the primary factors driving the shift toward high-performance Ethernet solutions. It also shares a large number of comments made by service providers with regard to their Ethernet services revenue performance. These statements illustrate why there is so much enthusiasm about Ethernet's prospects in the market.

**Section III** presents Heavy Reading's Ethernet Services Framework, along with diagrams and definitions for the various Ethernet connectivity services that are based upon work in industry standards bodies – where possible – as well as general understandings that have evolved within the service provider and vendor communities.

**Section IV** provides highlights on the service offerings of nearly all of the North American Ethernet operators and includes a detailed table identifying the various connectivity and access-based services sold by individual operators. The list of service providers covered has been expanded from 75 in the November 2004 report to 109 today.

**Section V** provides extensive profiles of the Ethernet service portfolios and strategies of 25 network operators. The profiles summarize:

1) Carrier Ethernet strategies
2) Ethernet revenue momentum
3) The markets serviced by all Ethernet services in the carrier's portfolio
4) Service pricing
5) The network equipment used to support all of the carrier's Ethernet services
6) Recent Ethernet-related activity
7) Ethernet-related plans
We also provide a set of standard information for the more than 150 connectivity and Internet services sold by these 25 operators, including:

1) The service name  
2) A description of the service  
3) The speed and bandwidth scaleability of the service  
4) Service performance characteristics  
5) SLA and billing comments  
6) Technologies used to support the particular service  
7) The coverage area for the particular service  
8) Applications supported by the service  
9) The target market for the service

These services represent nearly 40 percent of all the known Ethernet connectivity and Internet access services available in North America, and they certainly account for the vast majority of Ethernet services revenue in this market.

Section VI offers conclusions and recommendations for service providers.

The report is essential reading for a wide range of industry participants, including the following:

- **Ethernet service providers**: How does your rollout strategy for Ethernet services compare with those of other service providers? Which types of services are your competitors bringing to market? How deep will the competitive field be for Ethernet services? Which technologies are settling in as the most popular choices? How do your pricing strategies align with those of other carriers?

- **Equipment suppliers**: Which network operators are pursuing Ethernet services most aggressively? Which types of services and which technologies are they choosing? Which are the most aggressive emerging network operators, and how do your products mesh with their service deployment plans? Are there any Ethernet service providers that are slipping through the sales cracks?

- **Enterprise users**: Which carriers are offering the kinds of Ethernet services that you need? Which are making the strongest commitments to Ethernet? Are your service prices in line with what other carriers are offering, or is there an opportunity for you to strike a better deal?

- **Investors**: Which equipment makers and service providers are in the best position to capture market share in this important telecom industry sector?

*Ethernet Services Carrier Scorecard: North America* is published in PDF format.