2004 Enterprise User Survey on Ethernet Services

EXECUTIVE SUMMARY

Service providers are clearly counting on Ethernet services as a key revenue growth agent not only in the near term but for many years to come. As documented in an earlier Heavy Reading report, *2004 Survey of Carrier Attitudes Toward IP/MPLS Backbones and VPNs*, providers have already started to move legacy data service offerings (including leased lines and Frame Relay) to a converged services platform, and Ethernet is a linchpin technology for that migration.

As they refurbish their networks to enable new services, carriers are assuming that their enterprise customers have a deep interest in the kinds of Ethernet services being developed. Those assumptions appear valid on several levels. For instance, enterprises typically already have deep experience with Ethernet in their internal networks, so the development of carrier Ethernet services is a natural extension of their in-house expertise. Ethernet services promise to deliver much higher bandwidth than older carrier data services, and at a lower cost – two factors that would appear to make Ethernet services a clear winner for enterprises.

But beyond these general truisms, how is the market for carrier Ethernet services really going to shape up? What are the key factors that will drive enterprise interest in Ethernet services, and do customer plans for deploying Ethernet services match carrier expectations?

Heavy Reading's *2004 Enterprise User Survey on Ethernet Services* explores enterprise user attitudes toward emerging Ethernet services, focusing on critical issues such as the following:

- What is the true extent of enterprise user interest in carrier-offered Ethernet and IP VPN services, and what proportion of enterprises have definite plans to abandon legacy data services in favor of new offerings?
- What are the primary drivers attracting enterprises to Ethernet and IP VPN services?
- What do enterprise users see as the main deterrents to using Ethernet services?
- What types of carrier-delivered Ethernet services are most attractive to enterprise users?
- How important are reliability and security issues to enterprise users? More importantly, how much of a price premium are enterprise users willing to pay for reliable and secure Ethernet services?
- For those enterprises that are not planning to migrate to Ethernet, are there any factors or developments that would cause them to rethink their strategies?

The study is based on an exclusive, invitation only worldwide survey of 319 enterprise user executives, engineers, and managers who are personally involved in specifying, purchasing, or administering communications services for their organization. Those respondents represent more
than 200 different enterprises in more than 25 different private industry and public sectors. Purchasers of this report gain access to a searchable database of all report results. The database allows for further analysis by demographic segment, including the following parameters:

- Company size
- Size of company network (number of sites)
- Vertical industry sector
- Geographic region
- Respondent job category

Key Findings

Key findings of this study include the following:

**Ethernet services now present a huge market opportunity for service providers, but customer expectations for carrier-delivered Ethernet are extremely high.** The vast majority of enterprise managers surveyed for this report said their organization either already uses or plans to use carrier-delivered Ethernet services. Those respondents said they are most attracted to Ethernet’s price-per-bit proposition, and most believed that carriers could deliver reliable and secure Ethernet services. However, most respondents also believe that Ethernet security and reliability should come at only a slight premium, with most saying that services such as managed protection should be included in the base price for Ethernet services. Together, these results indicate that enterprise users are setting a very high bar with their expectations for Ethernet services.

**Demand for Ethernet and IP VPN services has the potential to be greater than for any other carrier-delivered data services – including private circuits.** Nearly 85 percent of all enterprise users surveyed said their organization either already used Ethernet and IP VPN services or planned to do so. These results indicate that service providers have an incredible opportunity to boost data service revenues via rapid deployment of infrastructure to enable Ethernet services.

**Carriers will be able to use Ethernet services to attract small to midsized enterprise customers.** More than 80 percent of respondents from companies with fewer than 500 employees said they now use or plan to use carrier-delivered Ethernet services, while less than half of those respondents said their organization would use either Frame Relay or ATM services. Ethernet services clearly are perceived as an economical alternative for smaller enterprises that otherwise may not use carrier data services.

**Although users say high levels of security are critical for applications running across carrier-delivered Ethernet services, relatively few are willing to pay a premium for managed protection.** Less than 30 percent of respondents said they were willing to pay extra for Ethernet service providers to manage protection, while nearly 60 percent said managed protection should be included in their standard service at no extra charge. This resistance to premium pricing should raise warning flags for service providers that see Ethernet services as a way to sell lucrative add-on services to enterprise customers.

**Likewise, most enterprises are not willing to pay a significant premium for an Ethernet service that offers QOS guarantees.** Nearly 40 percent of current and planned Ethernet service users said they were not willing to pay more than a 10 percent premium for QOS guarantees, and another 31.7 percent said they were not willing to pay anything extra for QOS.

**Potential users see limited service availability as the main barrier to deployment of carrier-delivered Ethernet services.** Enterprise users see lack of widespread availability as the biggest obstacle to using Ethernet services, with nearly one-third of respondents saying that limited avail-
Users of legacy data services want to see tangible cost savings before they make the switch to Ethernet services. Less than 20 percent of respondents said they would switch to Ethernet from private circuits or Frame Relay services if their bandwidth costs remained the same. Most users said they expect to get at least 50 percent more bandwidth for their money from Ethernet services, and about 20 percent said they want to get 10 Mbit/s of bandwidth at the same price as a T1 or E1 circuit before they switch to Ethernet services.

Survey Scope and Objectives

Survey participants include managers from both small and medium businesses and from large, multinational organizations. The following excerpts show specific data on the respondents in the survey base.

Excerpt 1: Survey Respondents by Region

Source: Heavy Reading

Excerpt 2: Size of Organization

Source: Heavy Reading
Respondents were asked to identify their organization’s current or planned use of the following five services:

- Private circuits
- Frame Relay
- ATM services
- Ethernet services from a service provider
- IP VPNs from a service provider

Those respondents who indicated that their organization had no plans to use Ethernet services from a service provider were asked to identify the following:

- Factors that influenced their company’s decision against using Ethernet services
- Developments that would cause their firm to change strategy regarding Ethernet services

Respondents who said their organization either already uses or plans to use Ethernet services were asked a series of questions regarding the perceived strengths and weaknesses of Ethernet services. First they were asked to rate the importance of the following benefits of Ethernet services to their organization:

- Delivers more bandwidth per dollar, euro, etc.
- Eliminates the need for expensive WAN interfaces
- Offers very high bandwidth WAN connections
- Provides the ability to upgrade bandwidths quickly
- Provides the ability to get exact bandwidth needed
- Offers the simplicity and familiarity of Ethernet

Respondents were also asked to rate the importance of the following factors to the applications that their organization will run over carrier-delivered Ethernet services:

- High bandwidth
- Low latency
- Low jitter
- Low packet loss
- High levels of security

Users or planned users of Ethernet services were then asked to rate the following potential deterrents to using carrier-provided Ethernet services:

- Limited service availability
- Price concerns
- Security concerns
- Reliability concerns
- Performance concerns
Users also were asked specific questions about the following carrier-provided Ethernet services, including questions about perceived network and application security risks associated with each:

- Ethernet private lines
- Ethernet virtual private lines
- Ethernet private LANs
- Ethernet virtual private LANs

Finally, users were asked a series of questions about the importance of service interworking to their plans for using carrier-delivered Ethernet services, and about their willingness to pay a premium price for services that deliver QOS guarantees or that offer managed protection.

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

- **Service providers**: How strong is enterprise demand for carrier-delivered Ethernet services? Which types of services are enterprises most interested in? What kinds of price and performance expectations do enterprise users have regarding Ethernet services? Which marketing and pricing strategies might best be used for this vital market?

- **Ethernet system and subsystem manufacturers**: How do your products align with likely end-user demand for carrier Ethernet services? Can you present service provider customers with clear and compelling evidence that Ethernet service rollout is now a must to remain competitive?

- **Enterprise network managers and planners**: What do your colleagues at other organizations see as the key attractions of and deterrents to using carrier-delivered Ethernet service? Do demand trends suggest ways to maximize the value and performance you can get from Ethernet service providers?

- **Investors and financial analysts**: How strong will demand for Ethernet services be in coming months? Which types of services will be in greatest demand? What are the most realistic revenue expectations for carrier-delivered Ethernet? Will Ethernet truly emerge as a high-margin carrier service?

*Heavy Reading’s 2004 Enterprise User Survey on Ethernet Services* is published in PDF format. Report subscribers also gain access to a searchable database of all survey results.