EXECUTIVE SUMMARY

With deployment of carrier Ethernet technologies now in full swing, network operators and their technology suppliers are now making the transition from focusing on infrastructure issues to tackling what clearly is the make-or-break proposition for the carrier Ethernet movement: understanding and shaping enterprise user expectations for carrier-delivered Ethernet. With competition in the metro enterprise market intensifying, especially with aggressive moves being made by cable network operators for the small and midsized business (SMB) sector, network operators are under pressure as never before to calibrate their offerings to meet customer demands, rather than expect customers to match their expectations to the available services.

To help network operators and technology suppliers gain insight into the shifting priorities of enterprise customers, Heavy Reading has conducted several in-depth surveys to quantify end-user attitudes toward carrier Ethernet services. Carrier Ethernet Services: The View From the Enterprise presents full results from the latest of these surveys, conducted in the third and fourth quarters of 2007.

Carrier Ethernet Services: The View From the Enterprise is essential reading for a wide range of industry participants, including the following:

- **Network operators**: How will demand for carrier Ethernet progress in coming months and years? Which kinds of enterprises are most interested in carrier Ethernet, and what are their projected timetables for making the transition to carrier Ethernet services? What do enterprise users see as the key benefits of migration to carrier Ethernet, and what do they see as the biggest obstacles? What are the likely price and performance points that will attract enterprises to carrier Ethernet? What are the unique concerns of SMBs, and how can they be addressed by network operators?

- **Carrier Ethernet technology suppliers**: How is demand for carrier Ethernet service tracking compared with technology deployments? Are your network operator customers keeping ahead of the anticipated demand curve, or are they in danger of falling behind? Which industry verticals are moving most aggressively toward carrier Ethernet? How will end-user demand patterns affect network operator needs for carrier Ethernet gear in the months and years ahead?

- **Investors**: How much growth can network operators expect from carrier Ethernet services? How will shifts in end-user demand affect product portfolios of network operators and their technology suppliers? How will carrier Ethernet services affect profitability for the telecom service sector in the coming months and years?
Based on feedback from 92 respondents from 90 different enterprises, Carrier Ethernet Services: The View From the Enterprise provides up-to-date respondent views on a broad range of Ethernet service and application topics. The report has a relatively high representation of SMBs with fewer than 100 employees (41 percent of respondents), and includes respondents from a full range of industry vertical sectors.

Excerpt 1: Number of Employees in Respondents' Organization (N=92)

Excerpt 2: Sectors in Which Respondents' Employers Operate (N=92)

Purchasers of this report also gain online access to the complete database of survey results, searchable by a range of key demographic criteria (including company size, industry vertical, geographic region, and respondent job title, among others).
Ethernet connectivity services represent the largest share of data connectivity spending for individual enterprises whose employees participated in our survey. Nearly half of all survey respondents indicated that Ethernet connectivity services – including EPLs, EVPLs, EPLANs, and EVPLANs – represented at least 31 percent of their company’s overall spending on data connectivity services. One third of respondents said that Ethernet accounts for at least half of their data connectivity spending, while only 3 percent said that MPLS/IP VPNs account for at least half of their spending. These numbers suggest that respondents included a fairly large number of early adopters of Ethernet.

Excerpt 3: Share of Data Spending Currently Represented by Particular Services (N=91)

Enterprises are increasingly shifting from legacy services to Ethernet connectivity services because they promise to deliver equal or greater performance at competitive prices and enable convergence of real-time and non-real-time applications on a common network architecture. Survey results indicate that enterprises are embracing Ethernet first and foremost for the ease with which it allows them to cost-effectively scale with bandwidth requirements: Discussions with operators indicate that it is not uncommon for them to offer seven to ten times more Ethernet bandwidth for just twice the price of a traditional data service. Moreover, Ethernet bandwidth typically comes in more granular increments, which makes it easier for enterprises to purchase the right amount of bandwidth appropriate for their needs.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Essential</th>
<th>Very Important</th>
<th>Important</th>
<th>Only Slightly Important</th>
<th>Not Important At All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offers easy and scalable growth</td>
<td>29%</td>
<td>37%</td>
<td>32%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Supports multiple services over a single UNI</td>
<td>29%</td>
<td>33%</td>
<td>29%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Offers very high-bandwidth WAN connections</td>
<td>24%</td>
<td>37%</td>
<td>32%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Delivers more bandwidth for the money than other data services</td>
<td>20%</td>
<td>48%</td>
<td>30%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Provides QoS/CoS options for various voice, video, and data applications</td>
<td>19%</td>
<td>44%</td>
<td>30%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Eliminates expensive WAN interfaces</td>
<td>18%</td>
<td>37%</td>
<td>40%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Allows us to get the exact bandwidth needed</td>
<td>17%</td>
<td>35%</td>
<td>35%</td>
<td>11%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Heavy Reading

Report Scope & Structure

Carrier Ethernet Services: The View From the Enterprise is structured as follows:

Section I is an introduction to the report, with complete report key findings.

Section II details the makeup of the survey base, including the regional headquarters and geographic scope of respondents' employers, the size of the enterprises participating in the survey, the industry verticals represented by participants, and the job functions of respondents.

Section III explores current and planned spending trends related to legacy and next-generation data-connectivity services.

Section IV examines the characteristics of carrier Ethernet services that are most attractive to enterprise users, the importance enterprises place on certain service features, and the factors that enterprises consider when they purchase services from an Ethernet provider.

Section V focuses on current and planned enterprise use of various Ethernet connectivity services and Ethernet-based applications.

Section VI examines current and planned spending by enterprises on Ethernet connectivity services in relation to geographic reach and service type.

Section VII shares respondents' views about what their employers are seeking in terms of Ethernet-related QoS.

Carrier Ethernet Services: The View From the Enterprise is published in PDF format.