



Data center redux

New technologies, requirements lead to a new breed of data centers

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Demand for data center space continues to expand in New England, with local companies building new sites and national players looking to establish a foothold in the area.

But unlike the data center buildout of the 1990s, when "capacity" and "connectivity" were the catchwords of the industry, builders -- and their tenants -- this time around are focusing on energy costs and security.

That shift has caused data center landlords to think differently about their buildouts -- and has generated a growth spurt for companies selling into the centers with new technologies aimed at the more physical elements of a site, such as heating and cooling, as well as backup power generation and security.

For example, a 66,000-square-foot data center in Waltham previously owned by CTC Communications Inc. is being rebuilt by new owner Digital Realty Trust Inc. of Texas. CTC closed the facility around 2001 and sold it to a group of independent investors, who were unable to bring in clients during the downturn, according to Chris Crosby, vice president of operations and sales for Digital Realty Trust, a publicly traded real estate investment trust, or REIT.

With the new tenant demand in mind, DRT has gutted the building and is essentially starting from scratch, adding new cooling units and upgrading the uninterruptable power sources. Such upgrades are necessary to accommodate the demands of the new breed of data centers.

"A lot of the older data centers are at the end of their life cycle and can't handle it," said Crosby.

Power up

Those older facilities have become obsolete mostly because the power requirements have changed so drastically. Larger servers have given way to faster and smaller blade servers, which allow more processing power to fit in a smaller space. That market has exploded over the past three years, growing 49.3 percent year over year, with sales increasing 56.9 percent from 2004 to 2005, according to a February 2006 report from Framingham's IDC.

"As servers get smaller, the power need goes up, and that has significantly changed the data center market," said Kevin Lessard, VP of sales for ColoSpace Inc., which opened its sixth New England data center in Bedford, N.H. on July 1.

Equipment that once used 30 watts per square foot now require 100 watts per square foot, said Crosby.

Meeting a new demand

For companies that make infrastructure products for data centers, such as Avtech Software Inc. in Newport, R.I. and American Power Conversion Corp. in West Kingston, R.I., the change in dynamics has meant more business.

"The data center industry itself is growing moderately, but companies in our space are going to be growing exponentially," said Michael Sigourney, senior product specialist and co-founder of

Avtech, which reported 20 employees as recently as last December.

Started in 1987 when it was "delivering magnetic backup tapes via Fed-Ex," according to Sigourney, Avtech now makes software and hardware aimed at monitoring temperature, humidity, air flow and other parameters integral to protecting data centers from environmental conditions.

Thousands of customers use the company's products in their data centers, including MIT, Massachusetts General Hospital, Google Inc. and Victoria's Secret. The company also continues to expand, growing 40 percent to 50 percent per quarter, according to Sigourney, though he would not provide specific revenue numbers.

American Power Conversion, a publicly traded maker of power regulation products, is also looking to take advantage of shift in data center priorities. While it increased its infrastructure revenue from roughly \$1.7 billion in 2004 to just shy of \$2 billion in 2005, it spent \$31 million last October to acquire Avtech competitor NetBotz Inc. of Texas to get into the monitoring game. "IT hardware prices are coming down, and now people are focusing on their operations costs, like cooling and power," said Steven Carlini, director of product management for APC.

With the increase in power needs, and more information and services being generated every day, the need for space is only going to increase, said Carlini, and quickly.

"Things have to change quickly, and I think that it is going to drive the whole (data center development) process," he said. "Companies can't wait a few years to do it. It has to be done now."

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