

# Survey: VOIP Moves Beyond Cost-Cutting

Jim Metzler

**It hasn't "crossed the chasm" yet, but VOIP's functions are becoming almost as important as cost savings.**

**F**or a while, it looked as if voice over IP (VOIP) technologies were headed down the well-trodden technology path of being more hype than reality. As PSTN rates have continued to drop, some wondered whether VOIP equipment—routers, PBXs, servers and phones—would ever take hold.

In the last year, however, and despite the economic downturn, more organizations have been implementing VOIP systems, and are putting ever-increasing amounts of traffic over them. Moreover, both the experiences of the early adopters and the expectations of companies planning to install VOIP have begun to broaden.

These are the high-level findings of a survey conducted last spring by Ashton, Metzler & Associates in conjunction with Key3Media, bolstered by the experience of several of Ashton, Metzler's recent clients. The survey collected responses to a variety of questions on VOIP from 631 people. All were pre-qualified Network+Interop attendees, subscribers to *Business Communications Review* or attendees at BCR's VoiceCon2002 Conference.

The total of 631 responses was winnowed down to 440 by removing those from people who indicated that they were not knowledgeable of their organizations' VOIP plans, and other unusable responses. The usable responses represent the views of voice and data staff, managers and IT executives, primarily from large organizations in a wide range of industries.

## It's Inevitable

As shown in Figure 1, 28 percent of the sample has already implemented some VOIP equipment, and another 51 percent plan either to evaluate or deploy VOIP during the next year. The companies that have implemented VOIP are using it much more extensively than they were a year ago, and they are predicting even greater usage.

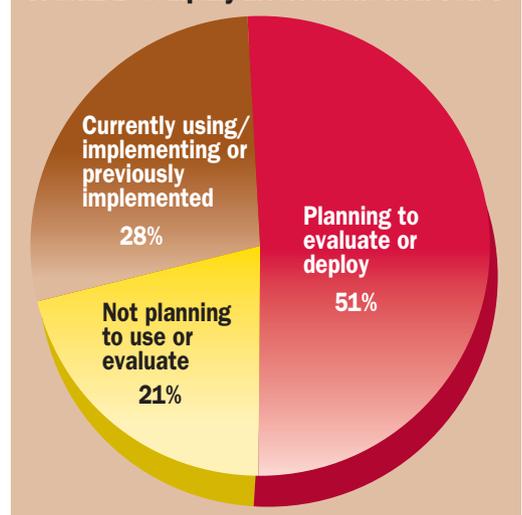
For example, last year, in a similar survey we

conducted, 80 percent of respondents were not putting *any* voice traffic over VOIP, and nearly half (46 percent) expected not to be doing so in a year. Those numbers have fallen dramatically; in this year's survey, only 35 percent of respondents say they are not using VOIP for any voice traffic, and only 13 percent say they won't be doing so next year.

This year, we also found that nearly one in five (18 percent) of the respondents who have already deployed VOIP are using it to carry 20 percent or more of their voice traffic, and 41 percent of current implementers expect to VOIP-enable at least 20 percent of their traffic within the next year (Figure 2.)

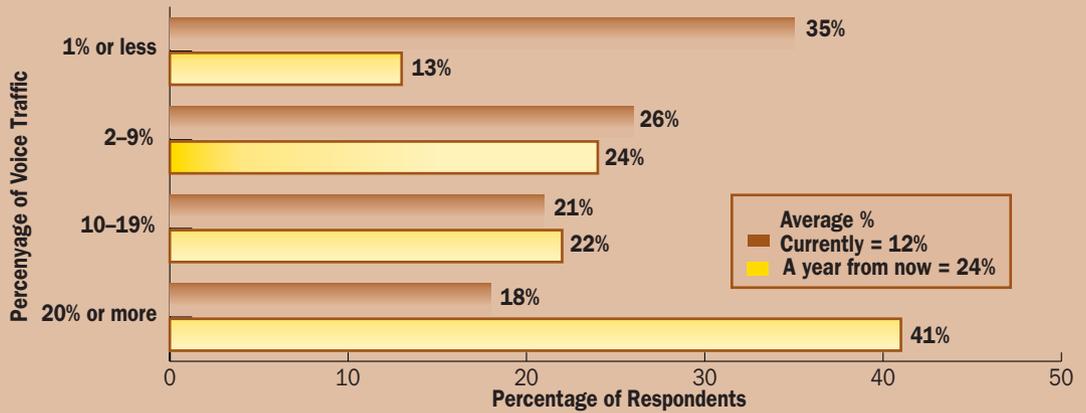
On the other hand, another one in five of this year's survey respondents (21 percent) said they are not currently planning to use or evaluate VOIP, mainly because they regard the technology as immature (28 percent) or because they are satisfied with their current solutions (26 percent). Only 12 percent of them think VOIP is too expensive, a substantial drop from last year's survey, when most respondents (59 percent) cited cost as the number-one barrier to VOIP deployment. In another dramatic shift, only 2 percent of this year's "not planning or evaluating" respondents said they didn't understand VOIP's benefits, down from 58 percent last year.

**FIGURE 1 Company Involvement With VOIP?**



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**FIGURE 2 Percentage Of Voice Traffic Carried Using VOIP—Currently vs. A Year From Now**



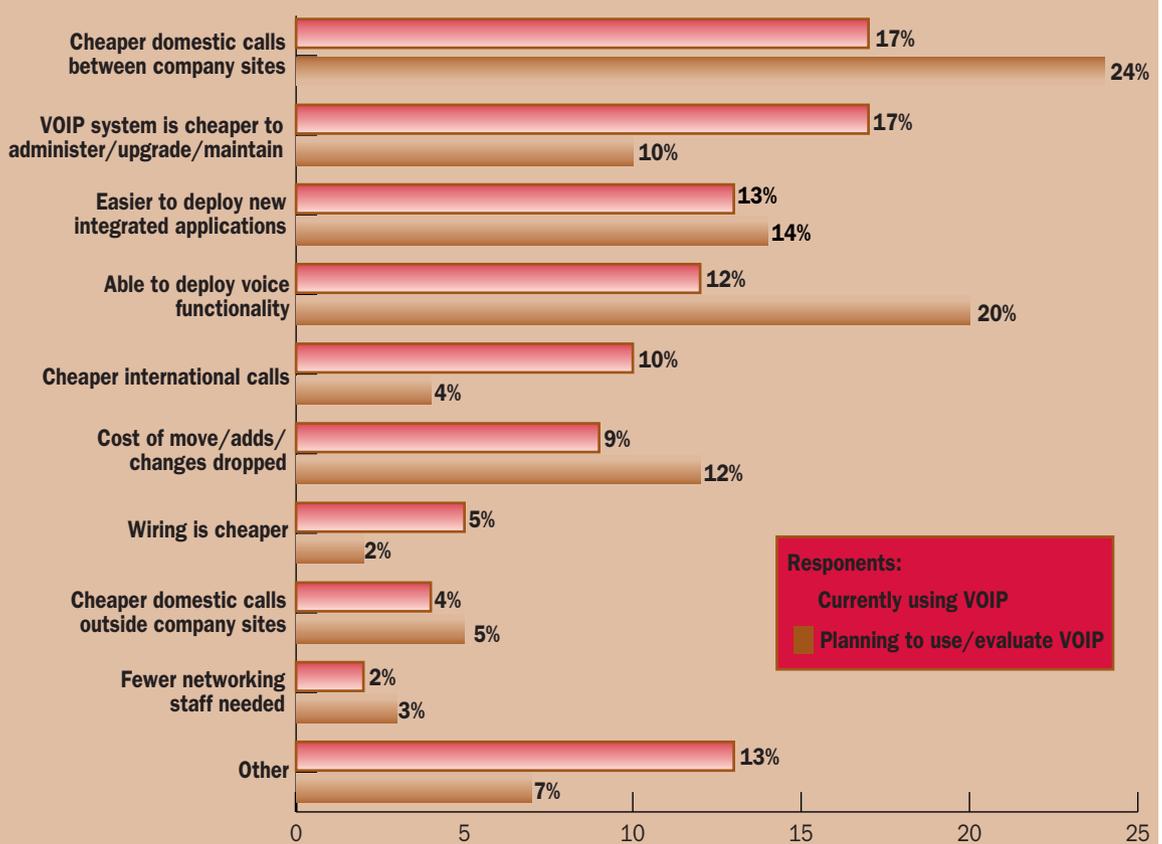
As VOIP systems mature, however, and as vendors increasingly abandon other technologies, the remaining VOIP holdouts will eventually come around. Packetized voice is inevitable, according to John Ridley, senior enterprise network architect at Coca-Cola Enterprises—although he predicts that users will first adopt packet-voice as a messaging application, with realtime voice succeeding only after quality of service (QOS) mechanisms are deployed in enterprise and service provider networks.

Indeed, QOS was the number-one challenge in

VOIP deployment, according to survey respondents who have already implemented VOIP (more on these challenges below). Yet most companies that have deployed VOIP are quite satisfied. Asked to rate their deployment experience on a scale of 1 (“not at all satisfied”) to 5 (“very satisfied”), 90 percent chose 3 or higher, 58 percent chose 4 or 5—and no respondents at all chose 1.

Those results indicate that customers are getting what they want out of the systems they have chosen. But other survey results indicate that what they want is gradually changing.

**FIGURE 3 Top Benefits Of Deploying VOIP**



### Wanted: More Savings And Functionality

Cost savings continue to dominate the drivers of VOIP deployment, although this has evolved beyond tariff arbitrage to include savings on moves, adds and changes and other administrative costs (Figure 3). Moreover, many in the next wave of VOIP adopters—e.g., survey respondents who are currently evaluating or planning VOIP implementations—want VOIP feature benefits for their branch offices. In these locations, advanced IP-based phone systems can replace aging key systems and deliver three-way calling, automatic call distribution (ACD) and other functions. Note that very few respondents (2–3 percent) either expect or have achieved any reductions in networking staff as a result of VOIP.

Royal Caribbean Cruise Lines is one company exemplifying this trend. Besides generating great savings on site-to-site calls, VOIP also has allowed the company to load-balance calls between its two call centers, maximizing the efficiency of its infrastructure as well as increasing agent productivity.

“We have seen savings in excess of \$500,000 annually in cost avoidance, by leveraging data connectivity to carry our voice traffic, by utilizing compression—resulting in nearly four times the capacity from a single T1—and by eliminating long-distance calls between remote offices,” said communications manager Aurora Aday. The com-

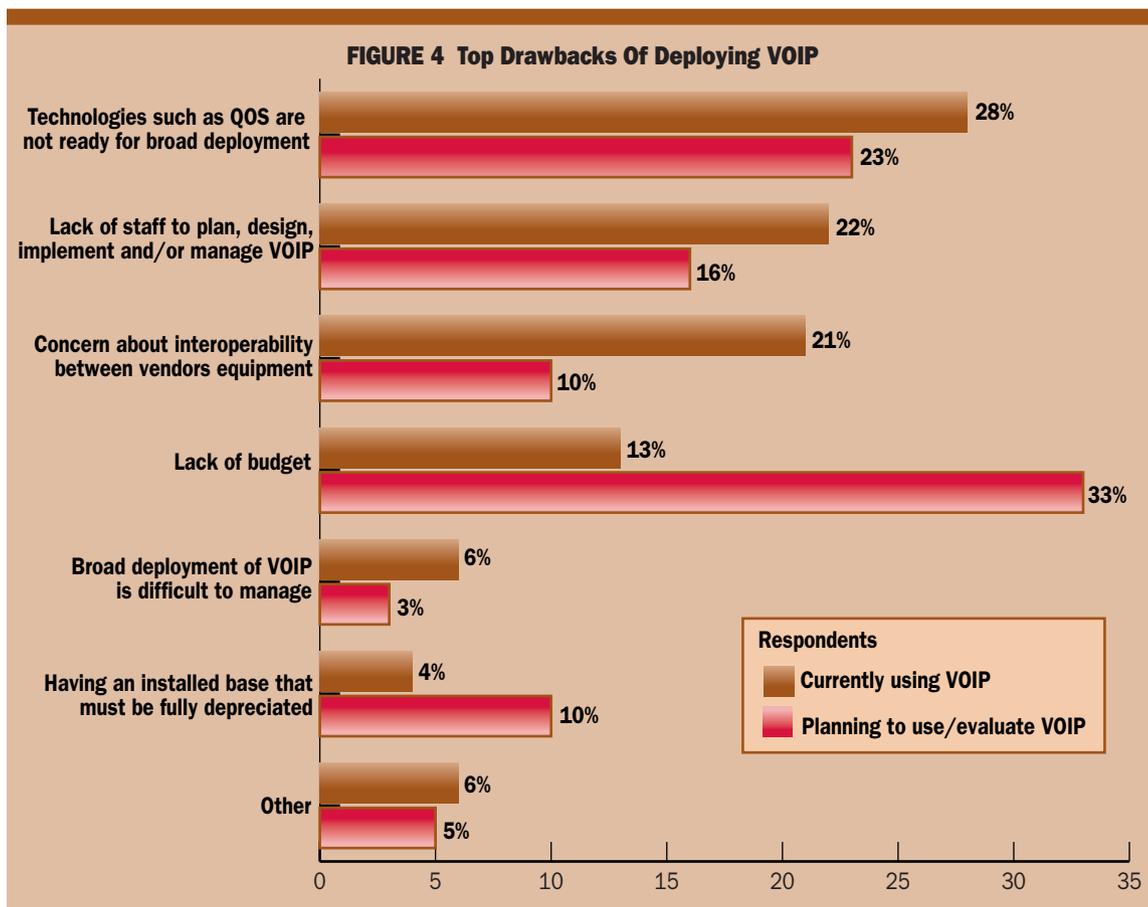
pany is currently evaluating IP softphones for business continuity and telecommuting applications, and Aday expects that VOIP will continue to play a vital part in Caribbean’s telecommuting, remote agent, and business continuity strategy.

Not surprisingly, Avaya’s internal VP of IT strategy, planning, and relationship management, Serge Minassian, has good things to say about the IP softphones his organization is using. “With the growing popularity of virtual offices and broadband virtual private network (VPN), our use of IP softphones has increased tremendously over the last year,” he said. “The feedback from our workers has been great. It provides functionality and quality as if they were in the office, and it’s been cost effective.”

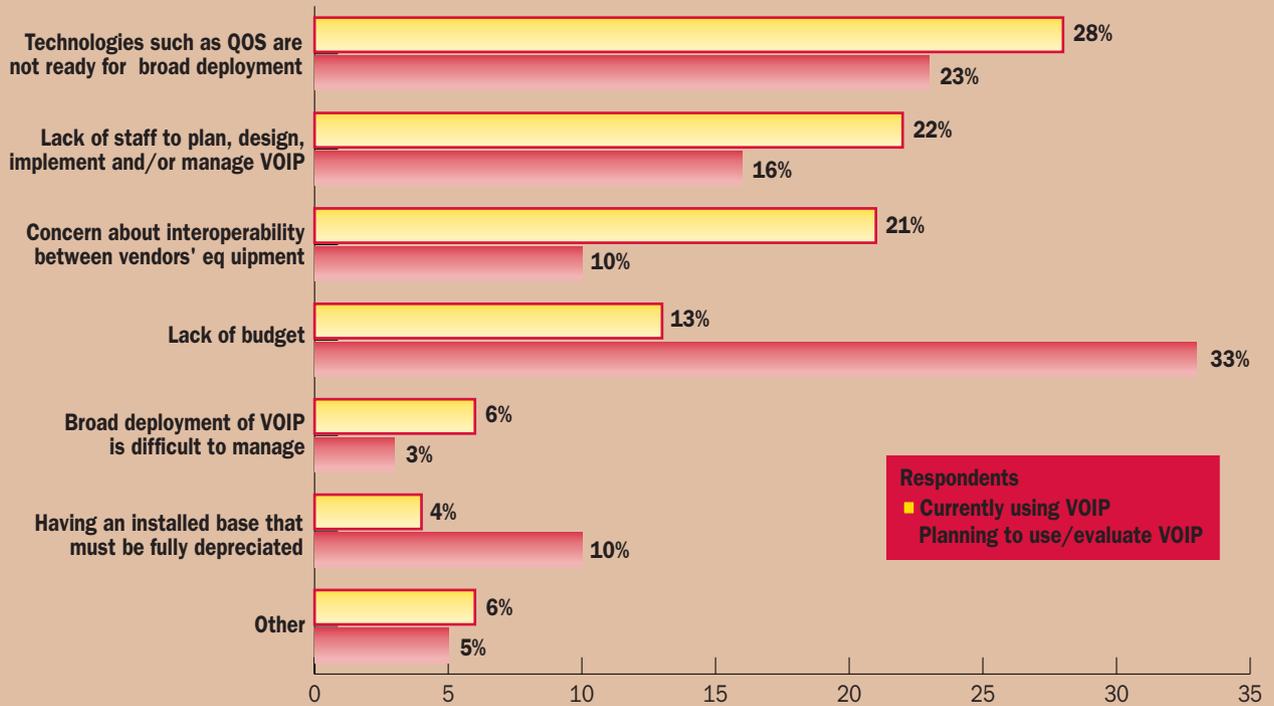
Elsewhere in the survey, and compared with last year’s results, we found growing evidence that users are looking to VOIP to deliver new voice functions and new integrated applications. Last year, only 9 percent of respondents said deploying new voice functionality was their number-one VOIP deployment driver, whereas this year, new functionality was the number-one driver for 20 percent of those who are planning to evaluate or deploy VOIP in the next year. A similar jump occurred for integrated apps, up from 6 percent last year to 14 percent this year.

Clearly, users are beginning to perceive VOIP in terms of both cost-saving and functional

**Cost-savings still dominate**



**FIGURE 5 Top Challenges VOIP Implementers Have Faced**



benefits. That's the case for Kirk Corkery, the corporate chief for iSERV, a Canadian government agency that provides IT services for the province of Ontario. iSERV has decided to switch from traditional Centrex to a premises-based IP voice system. "Voice over IP, or IP telephony, is becoming increasingly common," he said. "We are looking to replace our Centrex services because there is a business case to do so not only from a financial perspective, but also it will result in improved contingency planning and increased security."

**Drawbacks And Challenges**

Despite VOIP's increased momentum and broadened drivers, the actual deployment of VOIP systems is still more difficult than most users anticipate (Figure 4). Those who have already deployed VOIP also view the challenges somewhat differently than those who are still planning or evaluating the technology (Figure 5). For experienced VOIP-ers, the biggest challenges have to do with

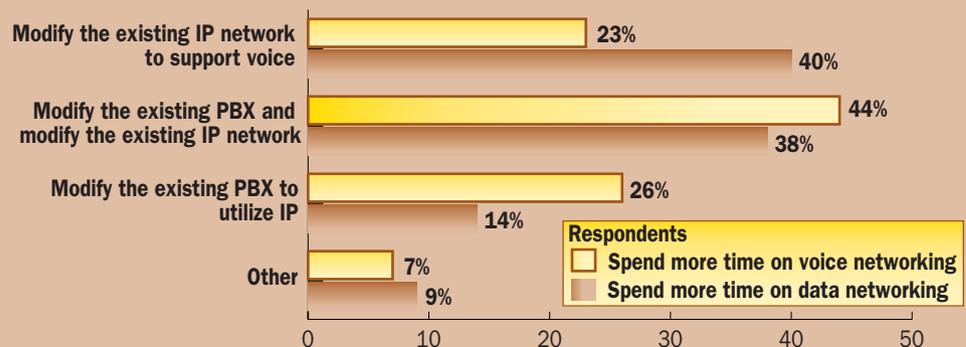
immature technology, lack of staff and equipment interoperability, while those who are still planning or evaluating are most concerned about finding the budget for a purchase.

John Parsons, global telecommunications manager with Eastman Kodak, said he would rather not complicate his international data network with VOIP technology, and instead consider buying VOIP services from a carrier—"But that isn't always cost effective," he said. Kodak currently saves toll charges in Asia and Latin America, where voice VPN services are unavailable or too expensive, by making use of VOIP multiplexers on its data backbone. He plans to upgrade or replace some of these muxes in the next year.

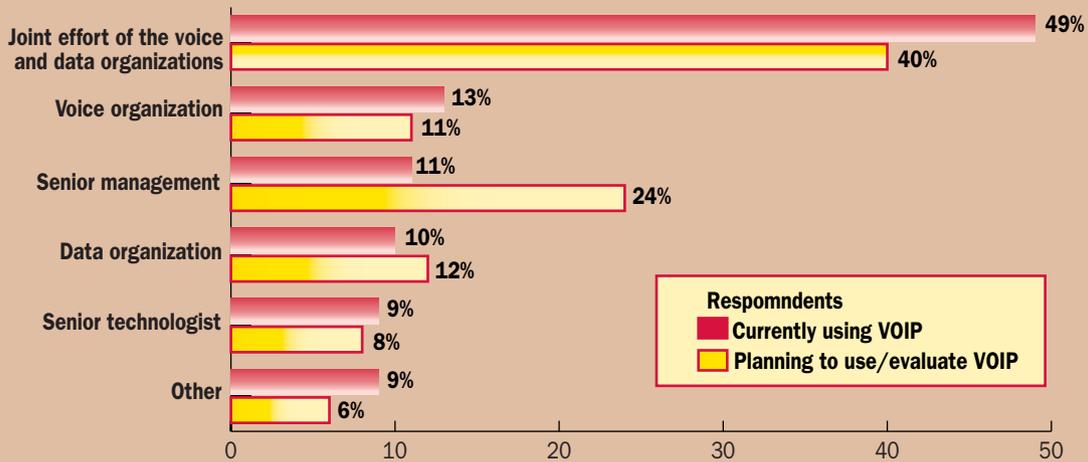
"VOIP is just another voice mux technology," Parsons said. "It can save money in some cases, but it greatly complicates your network design the more you add."

"The major issues we face are the lack of network engineers with both voice and data exper-

**FIGURE 6 How Voice and Data People Approach VOIP**



**FIGURE 7 Who Decides To Deploy VOIP?**



tise—within Kodak and within the suppliers—lack of expertise in setting up the proper QOS on the data network, determining the proper PBX interface equipment and lack of problem diagnosis skills,” Parsons concluded.

Avaya’s Minassian also had to make internal changes in order to deploy VOIP successfully. Besides expanding the skills of his network engineers and re-engineering their network design guidelines, he also created new scripts for the help desk and modified the change management process.

Even as experienced VOIP implementers adapt on a project-by-project basis, Coca Cola’s Ridley pointed out that several roadblocks still stand in the way of VOIP becoming the dominant methodology for voice traffic. “First, traditionally separate voice and data support organizations face cultural and educational convergence challenges,” he said. “Second, telephony vendors must adapt their marketing, sales and technical support efforts to a changing customer orientation. Third, MPLS WAN adoption and QOS management both must mature.”

Although our survey didn’t cover Ridley’s last two points, we found evidence that the traditional voice and data groups within IT approach VOIP somewhat differently (Figure 6). Both expect to use a combination of IP-enabled PBXs and IP networks, but the voice folks gravitate toward the IP-enabled PBXs, while the data people put more emphasis on modifying the IP network. Both groups’ skills will be necessary, as Terry Dymek, director of global telecommunications for EMC’s internal IT organization points out.

“New phone sets, different cabling, significantly different hardware, software and gateways need to be learned and understood by the technical people,” he said. “This really blurs the lines between voice and data, and everyone needs to adapt to the technology.”

Elsewhere in the survey we found that most respondents who have already deployed VOIP made the decision as a joint effort between the

data and voice shops, although it looks like senior management will be making more of these deployment decisions in the future (Figure 7).

**Conclusion**

Early VOIP adopters responded primarily to its cost-cutting benefits, and these remain strong in today’s market. But as VOIP products continue to mature and alternative technologies die off, users are finding additional reasons to justify deployment, notably voice feature/functions and, to a lesser extent, integrated applications. Senior management also is taking a more active role in deciding to deploy VOIP.

The VOIP marketplace has a ways to go before it can be considered fully mature, however, due to longstanding unresolved issues with QOS. Apart from QOS and equipment interoperability, however, the major issues that currently limit VOIP deployment (Figure 5) have little to do with technology.

Although VOIP is not yet a mainstream method for carrying enterprise voice traffic, it clearly is headed in that direction. In the future, we predict a growing divergence of the issues and trends surrounding the trunk-side “VOIP” function—i.e., the carrying of voice traffic across an IP network—versus “IP telephony,” referring to those IP-PBXs and IP-enabled PBXs which supply line-side feature/functions. It will also be interesting to assess the relative impact of IP-Centrex services, which will borrow their trunk-side characteristics from VOIP gateways and routers, and their line-side feature/functions from IP telephony systems□

**Companies Mentioned In This Article**

- Coca-Cola Enterprises ([www.cocacola.com](http://www.cocacola.com))
- Royal Caribbean Cruise Lines ([www.royalcaribbean.com](http://www.royalcaribbean.com))
- Avaya ([www.avaya.com](http://www.avaya.com))
- Eastman Kodak ([www.kodak.com](http://www.kodak.com))
- EMC ([www.emc.com](http://www.emc.com))