Cisco Faces Challenges to Its Lead in IP Telephony

Cisco Systems has worked hard to develop its IP telephony platform, now known as Call Manager. Cisco's product dominates this market, but competition has exposed gaps in functionality and weak distribution channels.

Cisco Systems is in the Leaders segment of two Magic Quadrants (see "Magic Quadrant for N.A. Enterprise Telephony, 2003" and "Magic Quadrant for Corporate Telephony in EMEA, 2003"). It owes its strong position to several factors:

- **Its influence with IT executives for network infrastructure** means that it is on most shortlists for next-generation telephony. Most IT executives list Cisco and the incumbent private branch exchange (PBX) vendor. If there is no incumbent PBX, because of mergers, acquisitions, or disparate procurement policy, new entrants gain an advantage, because there is less legacy investment to protect.

- **Its strong leadership in deploying pure IP telephony solutions** (see "North American IP Telephony Market Gains Momentum" and "Sales of IP Extension Lines Grow Rapidly in Western Europe").

- **Its financial strength**, which results from good business management, close control of the bottom line and an effective acquisition strategy.

Selling into a single corporate entity is much easier than managing relationships with disparate business units, and Cisco is well placed to exploit the opportunity. But this is a potential point of contention and project failure. IT executives should view voice as just another application on a data network (see "Business Value Drives VoIP and IP-Telephony Layering"). But it is essential to recognize that voice is a real-time application with its own set of characteristics. The voice group needs to be able to evaluate product fit. Ideally, this group should be part of the IT operation, and fully integrated with planning, implementation and management functions. At the very least, voice stakeholders must be a key part of the decision-making process for procuring telephony solutions. Companies that do not integrate the decision-making process across voice and data groups may find that users reject systems because of poor voice quality, lack of features and unreliability.
Product Capabilities

Developments to the Call Manager platform have been swift. In 2004, release 4.0 has added video telephony, stronger survivability and greater interconnectivity through QSIG (see "Cisco Adds Video to Its Telephony Systems"). Call Manager has strengths and weaknesses. It employs highly scalable, highly distributed architecture, resulting in some large-scale deployments of IP telephony. Its survivability solutions are technically sound, but expensive. It is good for managing a lot of remote office locations as a single entity.

Users are finding hidden benefits to moving to IP telephony because it can offer simple features that traditional systems can't, like missed call list and directory. But Call Manager still lacks the rich features that traditional vendor platforms, with 30 years experience in meeting user requirements, can offer. For example, key system emulation and operator console functionality can hinder the successful replacement of traditional PBX equipment.

Not all features are relevant. For example, "ring back" and "call waiting" were developed before the deployment of voice mail. Networking functionality is only required where two or more hardware PBX platforms are connected together. Companies should assess the needs of specific user groups — ordinary users, administrators (including personal and executive assistants) and telephone operators and high-volume users working outside call and contact centers. Include it in the request for proposal issued to telephony vendors.

The request for proposal should also include details of any third-party PBX platforms that telephony vendors will need to work with. Companies that have simple voice networks and are more advanced in the use of direct dialing and voice messaging will be less affected by a lack of features for end users.

Cisco and its channels have exacerbated the problem of lack of functionality by overselling the capability of Call Manager. Overselling is by no means limited to Cisco and its products, but the risk of not meeting user requirements is higher in a product with gaps in traditional capabilities. Data networking groups have become accustomed to a high level of support from Cisco, ensuring that their networks operate appropriately. The trust Cisco has built up in data networking has given companies a false sense of security in relation to its voice business.

It is too risky to migrate to a product with known deficiencies on the agreement, contractual or otherwise, that these will be fixed in a subsequent product release. No company should consider itself important enough that a vendor will adapt its product road map to meet customized product needs. Companies should carry out a risk assessment of missing features, assess their value and withhold payment until the functionality is delivered, or reconsider deployment altogether. Cisco recognized the deficiencies in its product, in Europe, and opted for partnerships with local vendors like Arc Solutions for Operator Console. Greater product flexibility will ensure a better match in enterprise requirements, but vendor partner relationships must be evaluated for sustainability.

Sales Strategy

Cisco's sales strategy and product capabilities have traditionally led it to target large-scale telephony replacement projects, which typically deal with changing thousands of end points. For example, Lehman Brothers had 10,500 end points in the United States and the United Kingdom, Abbey (formerly Abbey National) had 8,500 end points in the United Kingdom and Landspitali Hospital in Iceland had 2,500 end points.
These projects have enabled Cisco to get a credible foothold in the telephony market, but the company has also been party to some high-profile project failures — for example, the State of Alaska (40,000 end points), the city of Dallas (8,500 end points) and Merrill Lynch (7,500 end points).

**Channel and Program Management**

Channel competence has been identified as a key criterion for success. Cisco changed its channel program in the United States in August 2003. Call Manager is only distributed through specialized partners and IP Contact Center is only sold through Advanced Technology Partners. This change removed about 200 established partners and reduced the number of specialized suppliers to 250. It should enable Cisco to improve project success. Cisco has not restricted global distribution to specialized partners, but its European partners for Call Manager are already accredited.

Program management is another key factor in determining success. Successfully deploying IP telephony depends on having the right network infrastructure and associated applications. If the recommended methodologies are not used, IT managers can expect delays, cancellations, late-running projects, increasing implementation costs and disruption.

To minimize the risk of failure, companies should ensure that the service providers that plan and implement IP telephony projects have the necessary accreditation and skills to execute voice projects successfully. Companies should check accreditation details on Cisco's Web site (www.cisco.com/go/specializations) and ask for details of referenceable implementations and evidence that the provider has met service levels and that the staff are accredited. It is appropriate to include resumes for project staff.

Companies that implement large IP telephony projects using their own staff run a higher risk of failure than those that use third-party resources. IT executives should focus their skills on project sponsorship and management of services levels and timescales proposed by the vendor and service partner.

**Standards**

Cisco has frequently been criticized for not adopting standards. Within IP telephony, Cisco uses a proprietary Skinny Client Control Protocol (SCCP) between Cisco Call Manager and its IP handsets. This is generating some concern because the industry expects interoperability of communications devices, applications and platforms to be based on Session Initiated Protocol (SIP).

SIP is an open standard for establishing and managing multiparty, mixed media communications sessions over converged networks. It is an emerging standard with a limited set of features. Vendors are developing their own extensions to SIP or to the H.323 standards to deliver the full set of telephony functions at the desktop. But some are adopting a more open approach to multimedia collaboration. For example, Nortel Networks’ Multimedia Communication Server 5100 establishes mixed media collaboration sessions using SIP. Cisco has chosen to extend multimedia capability as a function of SCCP in Call Manager r.4.0. It supports video as an extension to a telephone call with VT Advantage 1.0. The result is the same, but the architectural approaches are very different.

We expect vendors to continue to extend proprietary protocols ahead of the SIP standard, but it will be far easier to migrate to the standard as it is ratified if the vendor adopts the near-standard architecture (see "SIP Will Make Significant Inroads by the End of 2006"). An architecture that enables companies to select network infrastructure, telephony and IP telephony applications like contact centers and unified
communications independently will give them the most flexibility in changing and modifying the different layers without affecting the rest.

Pricing

The cost of IP telephony has fallen by 40 percent since 2001. Yet it is still artificially high. Traditional voice vendors maintain high prices to avoid cannibalizing existing PBX revenue. Cisco has been criticized for maintaining price premiums with network infrastructure equipment, but is much more aggressive in a competitive telephony tender. Companies that spend large sums with Cisco enjoy discounts of 60 percent or more off list price for early adoption of new applications like Call Manager and IP Contact Center. They should exploit their competitive position to gain concessions on data network upgrades that may be required as part of the transition.

At the same time, procurement of IP telephony is more popular, with traditional vendors challenging Cisco for business. Cisco's CEO, John Chambers, stated that although orders for IP telephony have increased by 20 percent in Cisco's 2nd financial quarter of 2004 (4Q03), revenue had actually fallen by 10 percent. This is a clear indication that Cisco is experiencing greater competition, and is reaching smaller companies with products like Call Manager Express. This places more pressure on price.

Cisco's success in telephony varies across the globe. Its sales program in North America is more advanced. With large campus environments, Call Manager's scalability has given Cisco an edge over the competition in replacing a legacy PBX with a pure IP solution. In Western Europe, Cisco's strength is in meeting the needs of distributed corporate locations, primarily in partnership with service providers like Equant, BT, T-Systems and Cable and Wireless. European enterprises are more advanced in migrating to IP virtual private network services based on Multiprotocol Label Switching. Most of these services are based on Cisco products. Cisco is exploiting this to sell its Call Manager solutions.

**Bottom Line:** Cisco continues to be the dominant player in the adoption of IP telephony but will face greater competition through 2008. We strongly recommend that companies carry out a full evaluation of the needs of enterprise users and use this in qualifying all vendor capabilities, including performing a risk assessment of shortfalls in functionality. Including at least three suppliers in the shortlist will improve the responses from all vendors and service partners, reduce the acquisition cost and result in a better solution for the company.