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Growth By Acquisition

The Case of Cisco Systems

By Glenn Rifkin

Over the past four years, Cisco Systems Inc. has been on a mission: to dominate its data networking market much as I.B.M. did with mainframes and as Intel and Microsoft have done with personal computers. In order to fulfill this ambitious goal, Cisco, based in San Jose, Calif., has gone on a major buying spree, acquiring 14 companies since late 1993.

Thus far, Cisco has spent more than $5 billion and added more than 2,000 employees to its own rapidly expanding work force, all without slowing its phenomenal revenue growth rate of more than 80 percent a year since the company went public in 1990. The pace even picked up in 1996, as sales and net income both more than doubled, to $4.1 billion and $913 million, respectively. And according to John T. Chambers, Cisco's 47-year-old president and chief executive, the company's appetite has hardly been satisfied. Up to a dozen more acquisitions will be made in 1997, he says.

Though a darling of Wall Street, where its stock has been a stellar performer since its I.P.O., Cisco has kept a low profile throughout most of its existence. With a current market valuation of $42 billion, however, Cisco can no longer hide its mammoth presence in the high-tech marketplace. In fact, its ability to successfully acquire and integrate a continuing string of companies, including StrataCom, the largest acquisition in Silicon Valley history, is becoming part of the industry's new folklore. (The 3Com Corporation, a major Cisco competitor, recently agreed to acquire the U.S. Robotics Corporation, a modem maker, in a stock swap valued at $7.3 billion. If the deal is consummated, it would eclipse the Cisco/StrataCom acquisition.)

In most acquisitions, the buyer tends to get mired in the endless labored details of integrating the new company into the existing culture, resulting in slowed growth and downsized work forces and expectations. No wonder the stock price of an acquiring company generally drops on the day a takeover is announced. Not so with Cisco, which has found a formula for friendly acquisition and accelerated integration that has allowed it to gobble up small, fast-growing companies, meld the work forces and product lines and sprint forward seemingly without missing a beat.

In so doing, Cisco has become a prototype for the networked corporation: a decentralized set of business units that leverage the company's marketing, sales, manufacturing and distribution strengths. With this model, Cisco is reinventing itself, becoming a one-stop shopping option in a market that has long been far too technologically complex to allow any one vendor to grab such a ubiquitous role.

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SUMMARY OF CISCO ACQUISITIONS

	Closing Date	Total Value $ Closing (in millions)	Total Value $ 2/4/97 (in millions)	% Return
Crescendo	9/93	$95	$504	431%
Newport	8/94	93	$526	466%
Kalpana	12/94	240	942	293%
Lightstream	1/95	120	120	NMF (cash deal)
Combinet	10/95	132	252	91%
Internet Junction	10/95	6	10	86%
Grand Junction	11/95	400	630	58%
Network Translation Inc.	11/95	33	53	60%
TGV Software	3/96	138	186	35%
Stratacom	7/96	4,666	5,112	10%
Nashoba	9/96	100	114	14%
Granite	9/96	220	247	12%
Telebit	10/96	200	200	NMF (cash deal)
Netsys	11/96	79	84	7%

Founded in 1984 by Leonard Bosack and Sandy Lerner, a husband-and-wife team of computer scientists at Stanford University, Cisco quietly competed in the rapidly emerging market for hardware and software to connect networks of corporate computers. As recently as 10 years ago, sales came to just $1.5 million.

Until 1993, the company's fortunes were tied almost exclusively to a hardware device called a router, which forwards packets of data from one computer to another.

But four years ago, Cisco's management team realized that the market was changing rapidly, with the advent of faster and more intelligent "internetworking" devices like switches and hubs, which link local area and wide area networks. In addition, the coming of age of the Internet and the growing popularity of intranets, the corporate in-house version, put more demands on Cisco to provide a complex variety of networking solutions.

To dominate such a market, Cisco knew that it could not hope to internally develop the needed array of technology. With product cycles dropping below 18 months and long-term bets off, Mr. Chambers set out to buy what he couldn't develop quickly enough.

Starting with the $89 million acquisition of Crescendo, a switch maker, in the fall of 1993, Cisco has set a relentless pace for acquisitions. Over the years, a buying process has evolved that stresses a "blitzkrieg" mentality for every purchase. Companies are evaluated, approached, acquired and integrated with remarkable speed and efficiency, given the usual legal and cultural complexities surrounding such deals. Until the purchase in 1996 of StrataCom for $4.5 billion in stock, its biggest acquisition by far, Cisco never used an underwriter, preferring to pursue small, privately held technology companies in uncomplicated and friendly deals.

According to Charles Giancarlo, vice president for business development at Cisco, the underlying premise of every acquisition is "time-to-market." Cisco has become dominant in its industry in recent years by using its bulk and marketing muscle and by being first into emerging markets.

"We have a saying here, 'Early if not elegant,' " Mr. Giancarlo explains. "If you are a year late, that market might not exist anymore. We'd rather learn from our mistakes." Indeed, management has another blunt saying, "If we are not making mistakes, we aren't moving fast enough."

With this philosophy, Cisco has actually made few mistakes. Management believes there are two keys to a successful acquisition: doing the homework to select the right company and applying an effective and replicable integration process once the deal is struck.

Nearly all the acquisitions have been completed in the same regimented manner, putting a conservative spin on a decidedly non-traditional approach to growth. The Cisco rules for acquisition, in essence, create a blueprint for every takeover. The goal is to be smoothly shipping the acquired company's products under the Cisco label by the time the deal is officially closed, usually in three to six months.

For example, even before the ink is dry on a deal, Cisco's information technology department sets in motion an aggressive integration of the new company's technology. A six-person I.T. team is dedicated to the task and follows a strict methodology. Without much debate, the group integrates all systems, including toll-free support numbers, electronic mail, sales automation, Web sites and product order systems. The idea, says Cisco's chief information officer, Peter Solvik, is to present the acquired company to its customers as part of Cisco as soon as possible, usually within 100 days.

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Mr. Giancarlo and his director of business development, Michelangelo Volpi, serve as point men for each acquisition. But they stress that the acquisition process has become so much a part of Cisco's culture that everyone, from sales people to engineers, is attuned to potential deals. Mr. Giancarlo insists on having leaders from the various business units involved along the way because an acquired company must be embraced by an internal group with a show of ownership or sponsorship "or it will flounder and die."

In 1993, Cisco management created a matrix for emerging markets (which it constantly updates) and has identified niches, from Internet hardware and software to asynchronous transfer mode (A.T.M.) switches and routers, in which it intends to become a market leader. These markets are found through conversations with customers and by reading the trade press, attending industry conferences and listening to an endless stream of entreaties that pour into the company from bankers and entrepreneurs.

Once a market is identified, Cisco prefers to have its internal R&D organization develop a product. At least 70 percent of its products are developed internally. But the rule of thumb is that if the company does not have the resources to become a market leader within six months, it looks to buy its way in.

Over the past three years, Cisco's reputation has preceded it into new markets and the company now has established channels of information through which it learns about potential takeover targets. The sales force is a primary conduit, constantly providing management with feedback on competitors, both established and in start-up mode, that are tough to sell against. Internal marketing teams also scan the horizon for candidates, and a vast network of venture capitalists, investment bankers and entrepreneurs now seek Cisco out as a primary exit strategy when the time has come to achieve liquidity.

The profile for a target acquisition is bounded by a clear set of guidelines: a company must be fast-growing, focused, entrepreneurial, culturally similar to Cisco and geographically desirable. Cisco shies away from staid, old-line, slow movers and from turnaround candidates with hidden agendas. Other than StrataCom, which had $500 million in sales and 1,200 employees, the companies that Cisco has acquired typically had between 70 and 100 employees. The model, in fact, is to look for early-stage Ciscos, known inside the company as Cisco Kids.

Cisco limits its searches to three geographic areas: the Silicon Valley near its San Jose headquarters, the Research Triangle in North Carolina and the Route 128 corridor outside Boston. Virtually all the transactions are straight stock swaps handled through a pooling of interests. On two occasions, it invested equity stakes in startups aimed at building specific technologies, with the agreement that it would acquire the company outright when the product shipped.

Cisco shies away from complicated deals. "Our model does not deal well with complexity," said Dan Scheinman, vice president for legal affairs. Indeed, for that reason, Cisco has backed away from about as many deals as it has consummated.

Once a candidate is identified, Mr. Giancarlo or Mr. Volpi initiates a conversation with that company's chief executive. They are empowered by Mr. Chambers to take discussions well down the line, into the due diligence stage, before more senior management from Cisco is brought into the process.

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Hostile takeovers are not considered. If a chief executive says he is not interested, Cisco backs off. Cisco can, however, be persuasive if a C.E.O. is waffling. As it has soared in size, taken control of its markets and shown that acquired companies thrive once brought on board, the selling has gotten easier. Indeed, as the I.P.O. market for high-tech startups has tightened in the past 18 months, the road to liquidity through acquisition has become far more attractive to venture capitalists and entrepreneurs. More often than not, Cisco is approached by eager startups before it even goes to look.

Once an acquisition is negotiated, Cisco's integration team jumps in quickly. With its highly decentralized organization and more than half its employees hired within the last four years, Cisco has developed a culture that is extremely accepting and welcoming to acquired employees. There tends to be little "insider versus outsider" politicking. Management also encourages new arrivals to become part of the integration teams for subsequent acquisitions, figuring that these workers have a fresh understanding of the trauma of joining a large company in a takeover. In addition, management immediately lets the new employees know what their roles and titles will be.

A new employee's stock options continue to vest at the old rate but the options are now for Cisco stock, which is a big selling point. With its surging stock price -- the shares have split five times since 1990 and doubled in value in 1996 alone -- Cisco boasts hundreds of millionaires among its employees, thus making stock options in Cisco most welcome. The company is quick to point out that $1,000 invested in Cisco stock in 1990 would be worth more than $100,000 today.

Careful in its selection process and needing more people than it can find to sustain its growth, the Cisco acquisitions have resulted in just a handful of layoffs. In fact, the attrition rate among new employees is lower than the rate for Cisco's home-grown staff, which is itself among the lowest in the computer industry.

Management is aware that people are the crucial asset that is being acquired; engineers who have proven they can build a great product and are poised to create the next generation under Cisco's banner. Mr. Giancarlo adds that Cisco works hard to retain the C.E.O. of the acquired company for at least six months after the deal is closed. "If you don't retain executive management, you don't retain the rank and file," he says.

In fact, half of the chief executives and most of the senior managers of the 14 companies acquired since late 1993 are still with Cisco. Consultants who work with merged companies marvel at Cisco's ability to win acceptance from so many entrepreneurs for its corporate vision.

Mr. Giancarlo, for example, came to Cisco as part of the 1994 purchase of a small switching company known as Kalpana, which he co-founded. A technology visionary who had also started several other companies, Mr. Giancarlo was offered a job running Cisco's business development organization, spearheading acquisitions. Though he had no interest in becoming "a deal junkie," he was intrigued by the company's willingness to entrust him with the influential post.

"Cisco is able to hold onto people like me," he says. "They gave me a chance to play a major role."

For other founders and C.E.O.'s of acquired companies, like Andy Bechtolsheim, the founder of Granite, a manufacturer of computer switches, Cisco provides an unusual haven. Already wealthy, these entrepreneurs are driven by the desire to "build breakthrough products that can change the world overnight," Mr. Giancarlo says. Clearly, by leveraging Cisco's sales, marketing and distribution might, a startup's product stands a far greater chance of having a profound impact on the market. It is this synergy that has helped Cisco retain such stars as Mr. Bechtolsheim, who was also a co-founder of Sun Microsystems and who would otherwise chafe at the restrictions of a big company.

For Cisco management, the challenge lies in retaining control and balance amid the euphoric growth rates. Thus far, Cisco has retained the entrepreneurial spirit of a startup. But the company has mushroomed from 500 employees in 1991 to more than 10,000 this year. While continuing to aggressively pursue more acquisitions, management must constantly reinforce and emphasize the value of its own internal development organization. More importantly, Cisco, by shopping for a spate of disparate technologies to flesh out its product line, faces the challenge of tying all these varied products into seamless networks for its customers.

Mr. Chambers, the company's chief executive, is not unaware of these concerns.

"We're paranoid," he said. "A lot of companies are arrogant. They're on top and they believe they belong there. We've got almost the reverse attitude. We've got a tremendous fear of failing. We make Andy Grove at Intel look relaxed."

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AN INTERVIEW WITH JOHN T CHAMBERS
PRESIDENT AND CHIEF EXECUTIVE OF CISCO SYSTEMS

John T. Chambers, a 47-year-old native of West Virginia and a former I.B.M. and Wang Laboratories marketing veteran, joined Cisco Systems Inc. in 1991. He came in as the heir apparent to the chief executive, John P. Morgridge, and fashioned the company's aggressive growth strategy, which included plans for Cisco to be a partner, create joint ventures and, most of all, acquire its way to a dominant position in the data networking marketplace. Mr. Chambers, who become chief executive in January 1995, spoke recently with Strategy & Business from Cisco headquarters in San Jose, Calif.

S&B: *From its founding in 1984, Cisco seemed content to compete in the marketplace in traditional ways. Then, in 1993, the company changed its strategy and put a premium on speed as well as growth. Why did you adopt the new approach?*

JOHN CHAMBERS: We decided to become more aggressive as a company and to look at the market more in Internet years, as opposed to calendar years. Things are changing so fast with regard to the Internet that each regular business calendar year equals seven Internet business years. So instead of looking at a one-year plan, we began looking at every quarter and adjusting our plan up or down.

S&B: *Prior to the shift in strategy, you were growing pretty fast. Why did you feel the need to change?*

JOHN CHAMBERS: Without realizing it, we actually had stifled our growth. Even though the growth rate was off the charts, we probably could have gotten another 20 percent per year by moving a little bit faster. Our conservatism was also one of our strengths -- we're more than a bit paranoid. But you always want to balance this paranoia with the confidence and ability to move forward and in 1993 we decided it was time to make some major philosophical changes.

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S&B: *Such as?*

JOHN CHAMBERS: We got very bold. We made the conscious decision, for example, that we were going to attempt to shape the future of the entire industry. We decided to play very aggressively and truly attempt in the networking industry what Microsoft did with PC's and I.B.M. did with mainframes. If you think of networking as the fourth evolution of computers -- the first being mainframes, where I.B.M. dominated; the second, minicomputers, where there was no clear leader; and the third, personal computers and local area networks, which was the era of Intel and Microsoft -- and if you understand that each evolution is bigger than the prior generation, you begin to get an idea of what we saw in front of us.

S&B: *How does one set out to achieve such world domination?*

JOHN CHAMBERS: We moved out of our "religious" technology mind-set, first of all. We were router bigots. We thought routers were the future, switching was wrong. [The hardware device known as a router forwards packets of data from one computer to another. Switches are faster and more intelligent "internetworking" devices that link local area and wide area networks of computers.]

So we moved out of that into a non-religious view about the technology. We also began to think a couple of years out about what could happen. Before that, we never thought beyond a year. We began to set stretch goals that many people would have thought impossible, and we made those goals part of our culture.

Rather than trying to do the impossible just by working harder -- if that's all it took, it would have already been done -- we asked, "What are we going to do uniquely to accomplish our stretch goals?" The first thing was to really empower teams. We went through an evolution from a very tight central management group with the top four or five people making all the decisions to the empowerment of groups. Our aim was to drive our strategy down through the company.

S&B: *You mentioned operating in Internet time. Even though you have internalized that new time frame, do you ever get surprised by unexpected turns in the market?*

JOHN CHAMBERS: We have a philosophy that we will eat our own young before somebody else does. In Internet years, things change at a much faster pace than you realize and we get surprised periodically.

Here's an example. We acquired a company called Lightstream in 1995 for its high-end A.T.M. [asynchronous transfer mode] capability. When we acquired it, it had only about $1.5 million in hardware revenue. We paid $120 million for it. One year later, its run rate was $45 million. It was well on the path to being a success, perhaps even a home run.

But then we began to notice that wide area networking and local area networking were coming together more rapidly than we had thought. Customers were telling us they were going to make buying decisions that were going to be implemented in the next year or two based on technology that was available today. In essence, they were telling us that while they liked our direction with Lightstream and liked our next-generation product, we were not going to have the market share that they needed to feel comfortable with in the next 12 to 18 months.

So even though Lightstream was on a tremendously successful run rate, we literally ate our own young and acquired StrataCom for $4.5 billion -- getting a much bigger player in the A.T.M. business -- because the market changed quicker than we thought.

When something changes faster than we anticipated, or we make some other mistake, then we adjust very quickly and don't spend a lot of time with the "Not Invented Here" syndrome, trying to protect our political decisions of two years ago.

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S&B: *How do your acquisitions fit into your strategy?*

JOHN CHAMBERS: During 1993, we decided to play across the entire inter-networking marketplace and we began to prioritize which areas we wanted to move into. Remember, this was an era when people thought partnerships and acquisitions did not work. It was a much different philosophy than exists today. Today everyone says acquisitions are an effective way to grow.

Let me tell you, when we did our first acquisition in 1993, we caught unbelievable heat in the press. We paid $89 million for a company called Crescendo that had only $10 million in revenues. A lot of people thought we had lost our frugality and direction. Now that company contributes more than $500 million in revenues to Cisco. In terms of our market cap, selling for eight times sales, it's worth $4 billion to our shareholders. And our acquisitions in local area network switching cost us $500 million and now contribute more than $1 billion in revenues -- or more than $8 billion to our market cap. So the strategy has worked out well. But at the time, it was not so obvious.

S&B: *Since acquisitions were not generally in favor then, what made you decide to adopt an acquisition-led growth strategy?*

JOHN CHAMBERS: We had a board meeting in August 1993 when we were trying to decide whether to merge with another large company, either SynOptics or Cabletron. Both companies were about the same size as we were, so it would have been a merger of equals.

But there was another alternative. It was to adopt a different philosophy. That philosophy was based on what we had learned from Hewlett-Packard -- about breaking up markets into segments -- combined with what we knew about the General Electric mentality of being either the No.1 or No. 2 player in each segment. When we adopted that new philosophy, we had three choices: achieve it by ourselves, by a combination with an equal or by partnering or acquiring other companies.

Our board was equally divided about what we should do. A merger of equals had a lot of appeal. If you combine the No. 1 and No. 2 players in an industry, by definition, you're No. 1, in terms of size. That much was obvious and positive. And when you are growing that fast, you have a number of key management openings you have to fill. By combining two companies with good management teams, you automatically build up the strength of your management and you do it quickly. You can also overlap your customer sets, which automatically widens your customer base and gives you more distribution channels.

In addition, a merger of equals that creates the No. 1 player in a market automatically makes your remaining competition second tier. As a result, your competition must rethink its strategy because if you are able to successfully execute your strategy, they are in deep trouble. In the end, you force a period of mergers and acquisitions on your competition. They have no choice but to respond to the changes you initiated.

S&B: *That argument sounds compelling. What kept you from pursuing it?*

JOHN CHAMBERS: When we looked more closely, our concerns were raised. For example, the statistics indicate that 50 percent of large-scale mergers fail. It is important to go into them realizing your odds of failure are that high. Mergers can fail on a number of levels. They can fail in terms of their benefit to the shareholders, customers, employees and business partners. Those are the four constituencies we use to evaluate decisions. A decision has to be right with each of those constituencies or we would not go forward with it.

S&B: *What made you believe you could not overcome those challenges?*

JOHN CHAMBERS: If you merge two companies that are growing at 80 percent rates, you stand a very good chance of stalling both of them out. That's a fact. When you combine companies, for a period of time, no matter how smoothly they operate, you lose momentum. Even today, as good as we are at acquisitions -- and I think we really know how to do them today -- when you make the acquisition, there is a period when you lose business momentum. Our industry is not like the banking industry, where you are acquiring branch banks and customers. In our industry, you are acquiring people. And if you don't keep those people, you have made a terrible, terrible investment. We pay between $500,000 and $2 million per person in an acquisition, which is a lot. So you can understand that if you don't keep the people, you've done a tremendous disservice to your shareholders and customers.

So we focus first on the people and how we incorporate them into our company, and then we focus on how to drive the business. That takes time. But as I said, in a merger of equals, you stand a very good chance of stalling out both companies when you take that time. It can be a major distraction to both.

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S&B: *What else was involved in your decision to avoid a merger of equals?*

JOHN CHAMBERS: When we looked at the visions of our potential partners, as well as where both those companies were going, we found that their direction was different from ours. That was crucial.

If you look at the troubled merger of Bay Networks [a major Cisco competitor that was created by the combination in 1994 of SynOptics Communications, which had been one of Cisco's potential partners, and Wellfleet Communications], you would see that the corporate presentation of Wellfleet and the corporate presentation of SynOptics existed in different universes from each other.

As for us, we are a very customer-driven company. We don't get involved in the religion of the technology. But Cabletron, the other company we looked at, was very technology-driven. The people there believed that A.T.M., for example, was the future and they were very much technology bigots. It does not mean one was right and the other wrong. It just demonstrated that our visions were dramatically
different.

And while we thought the distribution channels might overlap and actually help us, we came to see a lot of potential contention that would overlap negatively. We felt, for example, that as much as 60 percent of the channels might actually be driven to another vendor if we combined our two companies. That was the analysis behind our decision not to merge.

S&B: *You had the advantage of having done joint projects with both your potential merger partners. What impact did that have on your strategy?*

JOHN CHAMBERS: The fact that we had worked with both before made a huge difference in our deliberations. The smaller projects worked fine. But the big joint projects did not work well at all. That did not bode well for a merger. And in terms of future alliances, what would happen to our relationships with other companies in the industry if we did this merger with one of them? We felt there would be negatives.

If you really look at it, mergers of two equal cultures, where you divide the management team -- one from company A, one from company B -- all the way through, do not seem to work. You try to blend cultures in order to make a single, strong culture. But, in fact, you've got to have one culture that really survives and there has got to be a clear leader, in terms of who is going to lead the combined companies and which culture is going to be the one you stick with.

In the end, when we went back and looked at our strengths and looked at how they fit into a potential merger between equals, we saw it didn't match up.

S&B: *How did you persuade your board to follow an acquisition strategy, whereby you buy smaller companies? That strategy has its pitfalls as well.*

JOHN CHAMBERS: Our recommendation to the board went like this. Let's go back and build upon our strengths. Let's segment the market much like H.P. did. Let's break the market into four segments. Let's draw a matrix and adopt a G.E. mentality and target a 50 percent market share in each area you go into or you don't compete.

Then, we said, let's determine the product, services and distribution needs for each segment and combine the way of getting these products developed and sold -- whether internally, through joint development or through acquisition. In essence, we drew a matrix for the board of directors and said, here are the market segments we are going into.

We said that 70 percent of our products would continue to come from our internal development but 30 percent would come from other segments. Our chairman asked us to put the concept in graphical form, so we drew the matrix. The only thing we filled in was Crescendo, which was our first acquisition. Then, we said, during the course of the next several years, we would fill in all of the matrix. After that, we filled in the matrix with our overlying objectives: to be No. 1, No. 2 or don't compete; to have a 50 percent share in every market, as an objective; and never to enter a market where we can't get at least a 20 percent share right off the bat. As basic as that sounds, that is what we put in place.

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S&B: *The Crescendo acquisition set the tone for the rest of your strategy. At the time, however, you did not have a battle-tested acquisition plan or the structures in place to create one. How did you develop your plan?*

JOHN CHAMBERS: What we set out to do at the time of that acquisition was to change our organizational structure. But we did not even tell our internal people what we were doing. In essence, we made the conscious decision to break our company into business units and follow the H.P. model. We chose not to announce that, though. All we did was to make Crescendo a separate business unit when it came in and to keep our central engineering capabilities on the side. The Crescendo acquisition was successful for a simple reason. This industry had been dominated by small companies. The reason for its fragmentation was time-to-market -- having the fastest time-to-market is such an overriding factor.

When I came to Cisco six years ago, I thought that I.B.M. would be our toughest competitor. But I.B.M. has never really been able to challenge us. The reason is that it just cannot move fast enough. The I.B.M. culture doesn't allow it to. It can't make decisions fast enough. And without realizing it, we were becoming a big company.

When we made the decision to make our first acquisition, we were on a 60-percent-a-year growth curve. At that time, our competitors -- 3Com, Bay Networks and Cabletron -- were growing at 35 to 45 percent. Most companies would have been ecstatic at 60 percent because they would be growing almost 50 percent faster than their key competitors.

But guess what? Companies like Fore, Ascend and Cascade were growing even faster than we were. As a result, we realized that they were going to do to us what we were doing to I.B.M. if we were not able to move even quicker. We realized that we had to have some way to have the advantages of a big company while acting like a small company from a product development point of view. That's the point when we decided to break ourselves into business units for development while retaining big-company influence by leveraging our strengths in manufacturing and distribution and finance across the entire company.

Let me give you an example. We took a device like Crescendo's networking product, and within 18 months, we had a $500 million run rate. No small company could go from $10 million to $500 million in 18 months. They just can't scale. But we could scale because of our distribution, financial and manufacturing strengths.

S&B: *What are the key criteria for a successful acquisition?*

JOHN CHAMBERS: There are really four key issues, and for big acquisitions, there is a fifth. We do not do mergers or acquisitions or partnerships when there is not alignment around these issues.

First, if your visions are not the same -- about where the industry is going, what role each company wants to play in the industry -- you are constantly going to be at war. There can be differences in technology visions or industry visions. So you have to look at the visions of both companies and if they are dramatically different, you should back away.

Second, you have to produce quick wins for your shareholders. If we did not produce a win with Crescendo in the first year, our shareholders would have been all over us. And if it is only short-term, then it is not strategic. Shareholders have to benefit from any acquisition.

Third, you have to have long-term wins for all four constituencies -- shareholders, employees, customers and business partners. I know that sounds corny, but it is true.

Finally, the chemistry has to be right, which is hard to define.

The fifth element -- for large mergers and acquisitions -- is geographic proximity. Geography is key. If you are doing a large acquisition, the minute you get on an airplane, you've got a problem. It is different if you are doing an engineering or technology acquisition, because those can be remote. But if you are combining two large companies and the center of manufacturing or marketing is in San Jose, Calif., and you are in Boston, what future do you have? It is very limited.

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S&B: *How disciplined are you in your approach to those five criteria? If they are not all in place, will you still buy a company if the technology is great or the people are very good?*

JOHN CHAMBERS: No. We don't do it. We've killed nearly as many acquisitions as we've made. We killed acquisitions for those reasons even when they were very tempting. I believe it takes courage to walk away from a deal. It really does. You can get quite caught up in winning the acquisition and lose sight of what will make it successful. That's why we take such a disciplined approach.

S&B: *You've acquired 14 companies already with a stated goal of another 10 to 12 in 1997. Is there a single thread that weaves through your strategy?*

JOHN CHAMBERS: The first thing is you make a decision about what role you want to play in the industry and then what role you can play. Those are two separate issues. Once you do that, you have to say, what do you have to do to achieve your goal? And you can't get off track on that. One part is to do mergers and acquisitions. So you've got to build a culture that accepts that.

As simple as it sounds, it's like marriage. If you are selecting a partner for life, your ability to select that partner after one date isn't very good. Lots of people in the financial press say once Cisco does an acquisition it is a matter of management execution as to whether the acquisition works or not.

I argue with that. I think the most important decision in your acquisition is your selection process. If you select right, with the criteria we set, your probabilities of success are extremely high. It's tough enough to make a marriage work. If you don't spend a fair amount of time on the evaluation of what are the key ingredients for that, your probability of having a successful marriage after one date is pretty small. We spend a lot of time on the upfront.

S&B: *At $4.5 billion, StrataCom was the largest acquisition you have made so far. Do you think you could absorb anything bigger?*

JOHN CHAMBERS: Our ideal acquisition is a small startup that has a great technology product on the drawing board that is going to come out 6 to 12 months from now. When we do that, we are buying the engineers and the next-generation product. Then we blow the product through our distribution channels and leverage our manufacturing and financial strengths. However, we would not rule out larger acquisitions if the industry changes faster than we expected or where there is more of an integration than we expected.

Do we have anything larger in mind at the present? No. Our more typical acquisitions will continue to be smaller engineering organizations. We will continue to go after private companies. You can acquire them much quicker and with far fewer legal nightmares. There is also a lot less risk in those types of deals.

S&B: *Is there something in your model that is unique to high-tech industries?*

JOHN CHAMBERS: I think so. As I mentioned, we are in the business of acquiring people. That is different from the automotive or financial industries, where you are acquiring process, customer base and distribution. So when we acquire something, we are not acquiring distribution capabilities or manufacturing expertise. We -- Cisco -- are very good at that. We are acquiring technology. In this business, if you are acquiring technology, you are acquiring people.

That is the reason large companies that have acquired technology companies have failed. If you look at AT&T and NCR, or I.B.M. with ROLM, the acquirer did not understand that it was acquiring people and a culture. If you don't have a culture that quickly embraces the new acquisition, if you are not careful in the selection process, then the odds are high that your acquisition will fail.

Two years ago, we used to worry about what would happen if an I.B.M., H.P., AT&T or other large company acquired one of our key competitors. But the odds are very high that it would have failed. The reason it would have failed is that the culture required to make a company like Cisco or 3Com or Crescendo successful is not the same as the culture that is needed to make I.B.M. or AT&T successful.

As I said, if you pay $500,000 to $2 million per person for the people you acquire, and you lose 30 to 40 percent of those people in the first two years, you've made a terrible decision for your investors. If you go back and look at how many companies in this kind of acquisition deal lose 30 to 40 percent of their people in that period, it will shock you. That is why acquisitions in our industry fail.

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S&B: *What is special about your culture that allows you to integrate the acquisitions so fast?*

JOHN CHAMBERS: Again, you have to look at why many acquisitions fail. It's because the companies are left too independent for too long. Or worse, they know they are eventually going to combine, but you leave them alone and the politics begin and people begin to jockey over who is going to get which positions. We've learned that to make it successful you have to tell the employees of the companies up front what you are going to do, because trust is everything in this business. You have got to tell them early so you don't betray their trust later.

To move quickly, you want to find the advantages and disadvantages of scale. Usually, we keep engineering independent. We combine marketing and manufacturing and the information systems. We empower very talented people and then hold them accountable for the results. But we are also there to help them from making the wrong turns.

StrataCom is already integrated. The largest acquisition in terms of dollars that the industry had ever seen is something we integrated into our business in four months.

S&B: *Out of the 14 companies you have acquired, how many of the founders/C.E.O.'s stayed with Cisco?*

JOHN CHAMBERS: About half.

S&B: *Is that important? Do you try to get those people to stay or is it better if they leave?*

JOHN CHAMBERS: I missed one acquisition that I should have gotten because of a chemistry issue with the company's president. His was not a chemistry that would have fit into Cisco. The mistake I made was that the chemistry of the company's other leaders and employees would have fit in fine with ours. I should have bought the company, told the president up front that he wouldn't be part of the future and he would probably have left.

But the real issue is that I want to retain the majority of an acquired company's employees.

S&B: *How do you do that?*

JOHN CHAMBERS: You understand what is important to them, what motivates them. And you empower them. Take Andy Bechtolsheim, the founder of Granite, one of the companies we wound up acquiring. The first thing I asked Andy, who was also a co-founder of Sun Microsystems, was, "What's important to you? What do you want to do in life?" He said, "I want to take care of my employees here, make sure they are successful, and my customers. But I like to build products that sell billions of dollars." I said, "We're going to get along great." Once I understood how to motivate him, we were off and running.

S&B: *The genesis of your acquisition strategy took place when Cisco was essentially invisible. People in your industry knew about you, but it is really only in the past year that the general business community has learned about you. What, other than size, prompted you to raise your profile?*

JOHN CHAMBERS: Early on, we had no desire to be visible. Part of the reason was that there was no business advantage to publicity because most of our sales to our customers were direct. For our customers to hear about us in the press gave us no advantage. In addition, as a company, we never had the ego-need to be visible.

However, we realized about 18 months ago that we did have to become much more visible because our business was going to become more of a marketing game in addition to being a product-technology game. To find out what to do, we watched what Microsoft does in marketing. Microsoft is really awesome. We realized that it gets most of its marketing for free. Since we're a frugal company, that really appealed to us. As a result, we made the decision as a team that we wanted to become much more visible.

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S&B: *Has your increased visibility changed anything in the acquisitions area?*

JOHN CHAMBERS: It allows us to move quicker. When people realize what we do and how good we are at it and how good we are at keeping the people we acquire, it makes it much easier to acquire a company. As a result, we now have a chance to acquire everybody. There's almost no acquisition that goes down, even if one of our competitors is doing the buying, that does not come to us first to see if we are interested.

Unless the company is public, the decision is rarely simply a financial one. For example, there were several companies that would have paid a lot more money for Granite than we did. Andy Bechtolsheim knew the company he wanted to be acquired by. He knew the culture he wanted to become part of. He knew his customers and that his products would come to market through us and that his people not only would not be stifled but would have a chance to play a much larger role.

S&B: *How do you measure the success of your acquisitions?*

JOHN CHAMBERS: The way we measure the success of small-to-medium-size acquisitions is straightforward. Within three years, we would like to generate in revenue what we paid for the company. If we do that, then the acquisition was a good, solid base hit. If we do more than that -- say we do it in two years or even in one year -- then the acquisition was a home run or a grand slam. Crescendo was a grand slam.

S&B: *With acquisitions fueling incredible growth, are you getting so big that you face the same issues that hammered the hardware giants in the late 1980's?*

JOHN CHAMBERS: You know, there's no doubt that running at this pace is a challenge. At the top of the list is how do you manage the growth? How do you really create the culture of mergers and acquisitions and new ideas and keep your basic strengths? How do you avoid missing the major technology changes that occur? How do you avoid creating the hierarchy where an overhead structure supporting your sales people and engineers becomes your bottleneck as you drive through it?. How do you avoid getting too far away from your customers? Do I think we could trip in the future? Absolutely.

S&B: *Yet you have said there will be 10 or 12 more acquisitions this year. Is this going to go on forever?*

JOHN CHAMBERS: If the industry is going to be as big as some people project it to be, and if it continues to grow as fast as people are projecting it to grow, then acquisitions will stay an integral part of our strategy for the next five years.