Winter 1998

Wharton

ALUMNI MAGAZINE

MAKING IT IN SILICON VALLEY

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The Wharton School
University of Pennsylvania

GLOBAL ALUMNI NETWORK

15—17 may 1998

wharton alumni
weekend

Wharton Alumni Reunion
Philadelphia, PA, 15–17 May 1998

- Executive Education Sessions
- Alumni/faculty Exchanges
- The Dean's Wharton Town Meeting
- Picnic on the Quad
- Class Parties

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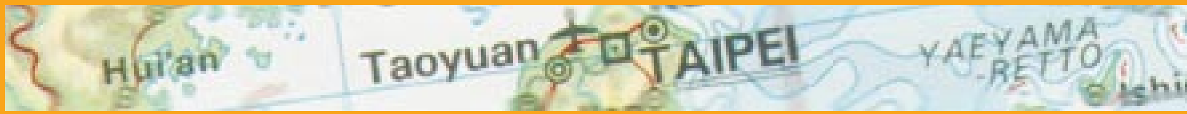

11–13 june 1998

innovation &
evolution

Innovation & Evolution:
Asia's Economic Emergence
Taipei, Taiwan, R.O.C. 11–13 June 1998
5th Asian Regional Alumni Meeting

For more information, please contact:
Injai W. Tai,
Regional Director/Greater China
886.2.23690011 ext. 110 phone
886.2.23696780 fax
tai@wharton.upenn.edu

25–26 june 1998

Labour at a
crossroads

Labour at a Crossroads:
Can Europe Rise to the Challenge of Global Markets?
Munich, Germany, 25–26 June 1998
3rd Wharton European Forum

For more information, please contact:
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The Wharton School
University of Pennsylvania

Wharton
ALUMNI MAGAZINE

Winter 1998

COVER ARTICLE

Location, location, location. For entrepreneurs and venture capitalists alike, the Valley is an ideal place — some would say the *only* place — to launch a technology company.

Photograph by Joseph Andris 7

Features

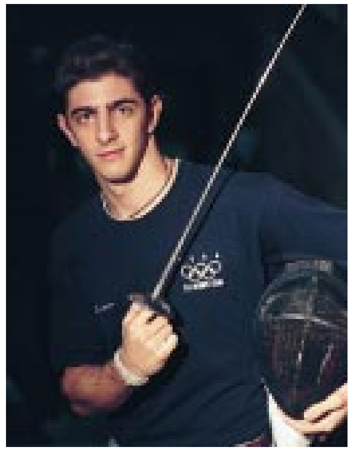
Departments

Undergraduate Aims For Olympics

As the number one ranked fencer in the U.S. for men's foil and the number one fencer on Penn's team, sophomore Cliff Bayer, W'00, would seem to have his hands full. But clearly you don't get to the top of this sport by standing still.

Bayer traveled to fencing tournaments in Montreal, Cuba and Venezuela during the past three months and will attend competitions in Italy and Portugal this spring. That's on top of practicing his sport every day on campus and every weekend at his hometown gym in New York City.

"It's not the kind of sport where you have a natural aptitude for it, like basketball," says Bayer, who started fencing at age 9. "You really have to work hard on technical skills. It's a lot of grunt work, a lot of drills ... Some people call it chess with muscles. I don't know how to play chess. But I know that you have to go into a match with a game plan. It's very tactical."



Bayer

Bayer fences with a foil, which is a thinner sword than an epee or a saber. Fencers wear bulletproof kevlar material and are hooked up electronically to a machine that lights up when a fencer is hit. "Fencing is the second fastest sport in the Olympics, behind shooting," says Bayer. "Sometimes two lights go off at the same time and it's hard for a referee to tell who got hit first."

Bayer participated in the world championships in Cape Town in July where he finished 40th, lower than he had hoped but higher than any other American. In August he represented Wharton at the World University games in Sicily, where he finished 15th. The U.S. team, which he captained, finished fifth — posting their best result so far and beating out teams from such traditional strongholds as France, Hungary and Austria.

"Goals are very important," says Bayer, who interned last summer at Merrill Lynch. "I like to set high goals for myself, because the higher you set them the higher your results will be. If you set low goals you are not really going to push yourself."

One of his goals is to participate in the Olympics in 2000 in Sydney. But before that, "I would like to find a job this summer in Milan and eventually major in international management. I have to realize there is life after fencing."

Julia Feldman

PHOTOGRAPHS / JERRY MILLEVOI

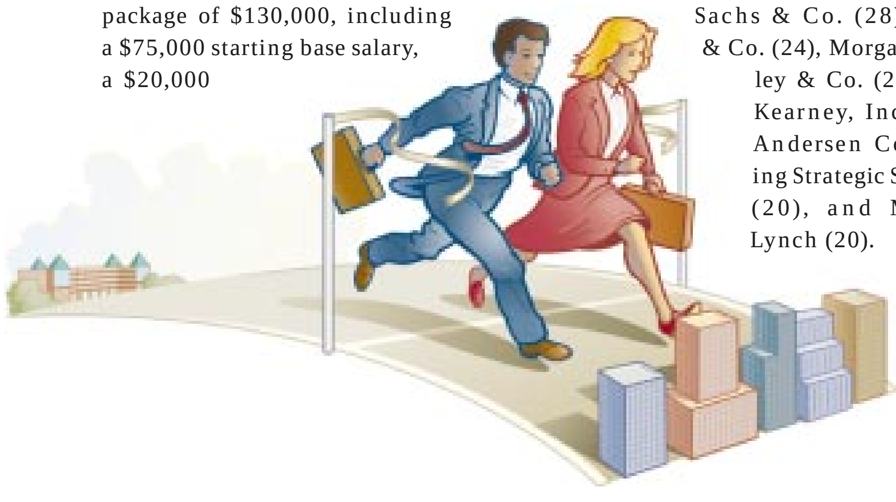
A Banner Year For Job Seekers

Perhaps it's the MBA equivalent of breaking the sound barrier. Wharton's 1997 MBA class broke all previous records in number of jobs offered, number of jobs accepted and total median compensation.

According to the Career Development & Placement Office, 98 percent of the class received job offers and 97 percent accepted positions. Graduates received a median compensation package of $130,000, including a $75,000 starting base salary, a $20,000 signing bonus, a $25,000 guaranteed first-year bonus and other miscellaneous compensation worth $10,000.

The three most popular industries were consulting, the top employer with 30 percent of the class, followed by investment banking/brokerage, with 25 percent, and high-tech industries, with 6 percent and growing.

McKinsey & Co. hired the most graduates (49), followed by Goldman, Sachs & Co. (28), Bain & Co. (24), Morgan Stanley & Co. (24), A.T. Kearney, Inc. (23), Andersen Consulting Strategic Services (20), and Merrill Lynch (20).

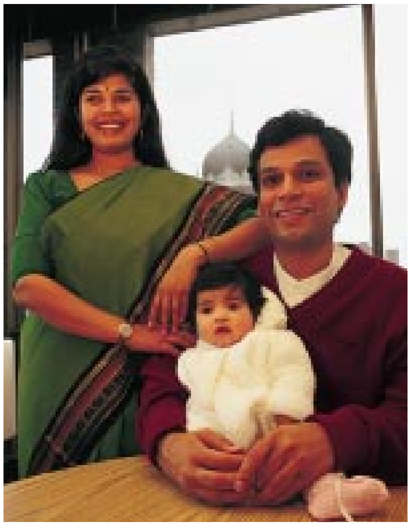


In the last three years, Wharton has sent 246 students — 115 graduates and 131 interns — into high-tech positions. In 1997, graduates or interns joined such firms as Activision, Broderbund Software, AT&T Wireless, CDNow, Dell, Hewlett-Packard, Microsoft, Intel, Disney Interactive, Excite, Intuit, Netscape, Oracle, PowerAgent, Silicon Graphics, Sony Music Online, Silicon Valley Internet Partners and Sprint.

Job offers with international responsibility were accepted by 43 percent of the class, while 21 percent took positions abroad. Of the 31 countries where graduates accepted job offers, the most popular (excluding the U.S.) are the United Kingdom, Japan, South Korea, Hong Kong, Mexico, Singapore and Brazil.

ILLUSTRATION / MICHAEL ROGALSKI

Scholarship in Mother Teresa's Name Benefits Indian Student — and India



Natarajan with wife Vidya and daughter Ragini: Looking to India's Future

When HOPE *worldwide*, an international philanthropic organization based in Wayne, Pa., presented its HOPE Unity Award last summer to Mother Teresa and her Calcutta-based Missionaries of Charity, Sambamurthy Natarajan, WG'99, had no idea that the award would relate in any way to his experience at Wharton.

The HOPE Unity Award included a two-year $50,000 scholarship for a Wharton MBA student from India who has demonstrated a commitment to returning home and helping his or her country's most disadvantaged citizens. Natarajan, after interviewing with officials from HOPE *worldwide*, was awarded the scholarship in August.

The 31-year-old finance major comes from Bhopal where he, his brother and his mother, who has a doctorate in education, started a private school called Vidya Mandir (Temple of Knowledge). The school provides an English education for approximately 800 students in grades K-8. "My family is not wealthy, but we had a vision that we wanted to leave a footprint in the sands of time," says Natarajan, whose father is a senior officer in the Bhopal government. "All the money that the school makes is ploughed back into improvements."

Natarajan, who continues to serve on the school's board of directors, earned an engineering degree near New Delhi and eventually joined Citibank, first in Singapore and then in Mumbai, Chicago and New York.

At Wharton, he was asked during an interview with the directors of HOPE *worldwide* how he would use his Wharton education to help his native country.

"I took great care to explain that I am not a social scientist or sociologist but a businessman," says Natarajan. "My intention is to go back to India in the next few years in the corporate world. As a successful career professional, I would hope to raise substantial funds from corporate sponsorships and well-off individuals and ultimately set up a non-governmental organization — to be run by professionals on a voluntary basis — that would channel experience, resources and ideas into activities for the poor.

"I am particularly interested in education and adoption. Adult education classes are needed to enable professional skill development, and basic literacy classes are needed for children. Adoption today is poorly organized, lacks marketing and communication and is full of barriers and stigmas. There are many homeless and there are many childless in India. There couldn't be a more perfect

Continued on page 28

DuRei and McDonalds

CELEBRATING ACHIEVEMENT: Beth Kaplan, W'80, WG'81, executive vice president, marketing, for Rite Aid Corp., received this year's Kathleen McDonald Distinguished Alumna Award from Wharton Women in Business at the 18th Annual Wharton Women in Business Conference on Oct. 31 in Philadelphia.

The award was renamed this year to honor Kathleen McDonald, WG'79, a lifetime advocate for women who was the original founder of what is now the Graduate Women in Business club. McDonald was killed in a car accident in June 1988 while on a business trip in Lisbon, Portugal. At the time of her death she was manager of organization and development for the performance division of Exxon Enterprises. In the spring of 1988 she had received the Exxon President's Award for Community Relations.

At left, Cathy DuRei, WWIB president, shows the plaque with the names of award winners to McDonald's father, Ambassador John W. McDonald, and her stepmother, Christel McDonald.

Kaplan

ALUMNUS HONORED FOR DISTINGUISHED SERVICE

MURATSU

Keisuke Muratsu, WG'75, president of Activity International, an advisory and investment firm based in Tokyo, received the 1997 Distinguished Service Award during a presentation in October.

The DSA was established by the Wharton Alumni Association in 1988 to recognize exemplary volunteer contributions to the School.

Muratsu has been a member of the School's Asian Executive Board since its formation in 1988 and president of the Wharton Club of Japan since 1994. His volunteer activities have included fundraising, public relations and faculty research. In addition, he was one of the original supporters of the Faculty International Seminar in Japan, and has participated in all seven seminars held so far.

Muratsu joined Citibank after his graduation from Wharton, holding positions in a variety of locations around the word, including Riyadh, Saudi Arabia, and Athens, Greece. He subsequently formed Activity International, Inc. and is also president of two family-owned manufacturing businesses based in the Kobe-Osaka area.

MANAGEMENT TRAINING OFFERED TO SENIOR EXECUTIVES IN CHINA

Under a landmark agreement with the People's Republic of China, Wharton and Penn's Graduate School of Education will provide management training for senior government officials and administrators in China.

The agreement was announced during PRC President Jiang Zemin's visit to campus on Oct. 30.

The programs, developed at the request of the Chinese government, will enhance management skills of public officials and executives of state-owned enterprises who are working at the national, regional and local levels in China, as well as expose them to the principles of a market-driven economy.

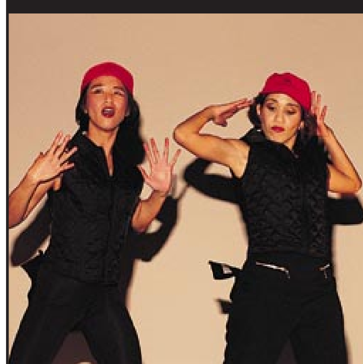
"As the PRC continues to emerge as a significant force in the global economy, government administrators and executives will need to understand the dynamics of a competitive environment," says Robert E. Mittelstaedt, Jr., vice dean and director of executive education at Wharton. "We are delighted to be selected by the Chinese government to create this first-of-its-kind educational initiative."

The three programs to be taught this year include:

- The National School of Administration Senior Management Program — a two-week course targeting senior government officials and focusing on China's transition to a competitive global economy.
- The Jiangsu Management Development Program — an intensive six to eight week management development experience at Wharton for provincial officials and senior executives.
- The Shanghai Executive Development Program — targeted to a broad market of managers and executives in state-owned enterprises and employees of multi-national corporations operating in China. Jiang Mian Heng, CEO of Shanghai Alliance Investment Ltd., will be Wharton's partner in Shanghai.

Wharton has close to 500 alumni in Greater China, and 107 students from this area are currently enrolled in MBA and undergraduate programs.

22nd Annual Wharton Follies



In Philadelphia:
Thursday through Saturday
Feb. 12, 13, 14
At 6 and 8 p.m.
Mandel Theater,
Drexel University
For ticket information,
call Noel Parks at
215.985.1570

In New York:
Friday, Feb. 20, at 8 p.m.
Tribeca Performing Arts Center
199 Chambers Street
For ticket information, call
Banu Tansever at 215.546.8344

PHOTOGRAPHS / JERRY MILLEVOI

Speaking From Experience

MOELIS

AMBANI

For many students, it was an opportunity for a behind-the-scenes look at some of the most successful companies in today's marketplace.

Under the auspices of the Zweig Executive Lecture Series, the Musser-Schoemaker Lecture Series, the Lauder Institute, the Gruss Public Policy Forum and other sponsors, top executives were invited to Wharton to meet with undergraduate and MBA students and share their perspectives on market trends, risk-taking, innovation, personal values and the importance of relationships, among other topics.

Speakers on campus last fall included:

- Rebecca Mark, CEO, Enron International
- Douglas A. "Sandy" Warner, Chairman, J.P. Morgan
- Anil Ambani, WG'82, Managing Director, Reliance Industries
- Ken Moelis, W'81, WG'81, Managing Director and CEO, Donaldson, Lufkin & Jenrette
- Shijuro Ogata, Senior Adviser, Yamaichi Securities
- Michael Dell, Chairman and CEO, Dell Computer Corp.
- Gilbert F. Casellas, Chairman, U.S. Equal Employment Opportunity Commission
- Lawrence Bossidy, Chairman and CEO, Allied Signal
- Clark Johnson, Chairman and CEO, Pier 1 Imports

SEVENTH ANNUAL
LATIN AMERICAN
CONFERENCE

at the

Pennsylvania Convention Center
Philadelphia, PA
Friday, February 27, 1998

theme:

"Growth Through Global Integration"

For further information or to register,

Call 215-573-5598 or
Fax 215-573-3651

Consulting By the Book

Two case scenarios:

- A European manufacturing company faces a declining return on net assets and has asked you as a consultant to come in and bail them out. What would you do?
- A big consulting company has come to campus looking for new recruits and you desperately want to get hired in their Paris office (or any other office). What would you do?

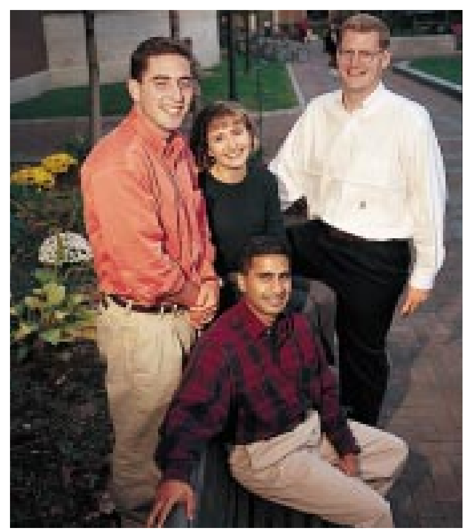
The answer to the second question is easy: Get hold of a new book edited by Will Auchincloss, WG'98, and Tom Kibarian, WG'97, titled *The 1997-98 Wharton MBA Consulting Club Case Interview Study Guide.*

For their material, the authors used actual case studies — like the example above about the European manufacturing company — from second-year students' interviews with consulting companies. The interviews were written up by Auchincloss, members of Wharton's management consulting club, and a number of students involved in the Christmas in April program. Proceeds from the original on-campus version of the book went to help the Christmas in April program.

"The book offers an opportunity to practice before the actual interview," says Auchincloss, who worked for Mercer Management over the summer. "And the consulting companies don't have a problem with it as long as we don't identify which case came from which firm." The project was spearheaded last year by Kibarian, who is now a consultant for McKinsey & Co. in Chicago.

The book is available at a cost of $15 from WetFeet Press, a small publishing company in San Francisco that distributes its products over the Internet.

What's in it for the authors and for Wharton? "The School gets royalties and enhanced prestige," says Auchincloss, "and the consulting club, which helped compile the cases, gets a little money to help cover expenses. Besides that, we had fun doing it. We think it will be a popular book."



FROM LEFT: MANAGEMENT CLUB MEMBERS JOE SCALISE, GWYNN HAMPTON, AUCHINCLOSS, AND (SEATED) VIT VASISTA

Campus NEWS

■ Fifteen Wharton faculty will participate in a weekly series on "Mastering Marketing" to appear in the *Financial Times* starting this spring. Other schools contributing articles to the series include Kellogg, INSEAD and the London School of Business.

■ Tom Siebel, CEO of Siebel Systems, Inc. in San Mateo, Ca., keynoted the 29th annual Seminar for Business Writers held Dec. 14-18 in Philadelphia. Siebel Systems is the world's leading provider of enterprise-class sales, marketing and customer service systems.

The 45 participants in the December seminar included journalists from the *New York Times, Fortune, Washington Post, CNN, Money, Business Week, U.S. News & World Report, Computerworld, Reuters* and *La Prensa,* among other organizations.

■ "Renaissance: Delivering the Tools for a New Era" was the theme of the 24th annual Whitney M. Young, Jr. Memorial Conference held Jan. 15-18 at the Philadelphia Convention Center. The conference was sponsored by Wharton's African American MBA Association.

Keynote speakers included Ernest Green, managing director, Lehman Brothers, and member of the "Little Rock Nine;" Harriet Michel, president of the National Minority Supplier Development Council, and The Hon. Festus Mogae, acting president of Botswana.

■ Impact conferences scheduled for this spring on campus include: "Managing Clinical Performances: Creating Competitive Advantage," sponsored by the Health Care Systems Department on March 9-10; "Retirement Needs and Resources," sponsored by the Pension Research Council on April 27 and 28; and "Ethical Issues in Financial Services," sponsored by the Zicklin Center for Business Ethics Research on May 29.

FEATURE

MAKING IT IN → SILICON VALLEY

SUCCESS IN THE HIGH-TECH BUSINESS TAKES
A) VISION
B) GREAT IDEAS
C) TERRIFIC MANAGEMENT
D) ATTENTION TO THE CUSTOMER
E) ALL OF THE ABOVE.
ANSWER(S) BELOW

WANTED: *Entrepreneur with a solid idea for a product that will meet the needs of the technology marketplace. Must have management acumen and a working knowledge of computer chips, software, biotechnology, electronics or other fields that average people find hopelessly arcane. Must be driven to succeed (mere self-starters need not apply). Must be ready to put in long hours and be unafraid of risks. Can work anywhere, but willingness to relocate to California's Silicon Valley a plus. Ultimate financial payoff commensurate with vision, determination and hard work.*

PHOTOGRAPHS / JOSEPH ANDRIS

You won't find this job description in the classified section of your local paper. Somebody interested in starting a technology company, or joining a start-up, doesn't scan the want-ads. But based on interviews with Wharton alumni now working in Silicon Valley — known by its inhabitants as, simply, the Valley — this is an apt short-hand description of a high-tech entrepreneur.

With this job profile in mind, what really is involved in starting a technology company? Is it easier to launch a firm these days than it was 10 or 15 years ago? Are low barriers to entry offset by the need to have not just a good idea, but a terrific idea that adds value to existing functions? What does it take to succeed?

Interview with Wharton Dean Thomas P. Gerrity

Technology: Changing the Fabric of Everything We Do

From 1969 to 1989, Wharton Dean Thomas P. Gerrity was chairman and CEO of Index Group, one of the world's leading consulting firms in the strategic management of information technology.

In the years since then, says Gerrity, who was appointed dean in 1990, "the management issues created by technological advancements haven't changed that much because the real power is not in the technology per se, but in its use and application by people."

At Wharton, says Gerrity, these uses and applications are everywhere. For example:

* New digital video capabilities are enabling Professor Jeremy Siegel's wildly popular market commentary to be broadcast to various locations on campus.
* Wharton's SPIKE Communications Software provides a single, customizable interface to the School's rich array of online student services.
* A new web-based interface called Wharton Research Data System (WRDS) harnesses large data sets for use by faculty and students, including stock prices and returns for more than 6,500 companies, information from Standard & Poor's on 7,000 publicly held companies, and macroeconomic data going back to 1946. Stanford and USC business schools have already adopted the system.
* The Wharton Technology Club — which last fall drew 200 students to its

Joe Durrett

To find out, we interviewed alumni with different perspectives — entrepreneurs who have been involved in starting companies from scratch, venture capitalists who finance fledgling firms, and executives at established technology companies. Some people we talked to have worn different hats, like the alumnus who played a key role in getting a firm off the ground and now helps manage a technology mutual fund.

In recent years, technology start-ups have blossomed like so many wildflowers in a mountain meadow. Once obscure companies such as Microsoft Corp. and Intel Corp. are now household names. The Internet, originally the province of the military and academics, is now a research, retailing and communications tool for the masses. Who would have thought as recently as a few years ago that your next-door neighbor would be able to create his or her own "site" on something called the "web"?

Shaking the Money Tree

One thing is for certain: the tech boom has not gone unnoticed by investors.

Each quarter, Coopers & Lybrand L.L.P. conducts a survey called the Money Tree that tracks venture-capital investments. For the third quarter of 1997, the 600 VC firms that were surveyed invested $3 billion in 646 U.S.-based companies. This brought total venture investments for the first nine months of 1997 to $8.6 billion in 1,916 financings. Coopers & Lybrand predicted that, by the end of 1997, venture investments would total $12 billion for the year, nearly $2 billion more than in 1996.

Software and communications companies received more financing, 22 percent, than any other industry segment during the third quarter of 1997. Internet-related companies received 18 percent. Among states, California received far more venture money than any other state — 41 percent. Massachusetts, a distant second, received 7 percent.

With all this cash available, you might think it's easier to start a technology company today than in the 1980s. But that would be only partially true.

"There's certainly more capital around, so in that sense it's much easier," says Ruthann Quindlen, WG'83, general partner at Institutional Venture Partners, a Menlo Park, Calif., firm that manages $735 million in venture capital and invests in early-stage companies in information and life sciences.

"However, the sophistication about investing in start-ups has grown tremendously in that time period," Quindlen says. "So the requirements for a very large market opportunity, a good management team and technical expertise have escalated. In that sense it's harder."

"What's more difficult is not so much coming up with a new idea but sustaining the growth of a business and generating profitability," says William L. Larson, W'77, CEO of McAfee Associates Inc., a Santa Clara, Calif., firm that makes computer-security and management-software products. "For example, many Internet start-ups have been successfully funded and gone public, but few of them have earnings potential. They're 'concept stocks' trading at high prices. I'm a big believer in stocks that generate earnings."

Joe Durrett, WG'69, chief executive officer of Broderbund Software Inc., a Novato, Calif., maker of the popular games Myst and its sequel, Riven, notes that barriers to entry are relatively low, at least for software companies.

"First, people are very willing to finance you because they believe there's a tremendous prospect of success," says Durrett, an experienced consumer brands and direct-marketing

first meeting — is sponsoring a speaker series throughout the year, a career fair on the West coast this month and a conference on campus in February. Five years ago, the club didn't exist.

* Faculty approved a cross-functional MBA major this fall to educate technological entrepreneurs and future leaders of technology-based companies. Courses range from "Innovation, Change and Entrepreneurial Management" and "Technology for Managers" to "Telecommunications Technology and Competitive Strategy."

* A Wharton professor and research director are co-editing a book — written entirely by members of the faculty — that identifies competitive strategies for firms in emerging technologies.

* The Career Development & Placement Office reports that over the past three years 246 MBA students took high-tech positions, the majority in Silicon Valley.

* At last spring's Wharton-India Economic Forum in Philadelphia, India's finance minister addressed conference participants by live video feed from New Delhi.

The use of technology, says Gerrity, "has changed the fabric of virtually everything we do at Wharton."

New Opportunities for Individuals

If you look at the global village, "information and communications technology is one of the driving forces behind its creation," Gerrity notes. "If you look at internal productivity increases, many of them are coming from the ability to exploit information and communications technologies throughout the organization ... And if you look at the executive who worked for Kraft General Foods and Procter & Gamble Co. before joining Broderbund in 1996. "Secondly, you don't need major plant and equipment. The principal investment is intellectual capital, and the role of sweat equity is tremendous."

Tales of Three Entrepreneurs

Carolyn A. Rogers, WG'86, graduated from the University of Colorado at Boulder with a bachelor's in electrical engineering and worked at IBM Corp. as a design engineer. Later, she received an MBA from Wharton and joined Hambrecht & Quist Inc.

After more than six years as a senior technology analyst at Hambrecht & Quist, Rogers decided she "didn't want to be a securities analyst for life … So I looked around for Plan B." She was specifically interested in a start-up. What she found was "10 guys in San Jose, Calif., who didn't have venture capital or business experience."

In the spring of 1992, those 10 engineers had started a company called PicoPower Technology Inc., which made power-management semiconductor chips for portable computers. While Rogers was still at Hambrecht & Quist, she convinced the engineers that they needed her to write their business plan, a project that took six months. Rogers then joined PicoPower as vice president of finance and chief financial officer in the company's 3,000 square feet of cramped space.

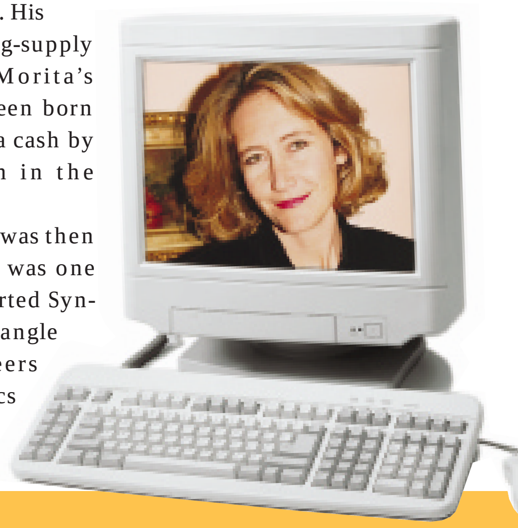
Rogers helped raise $5 million in venture money. She hired a controller and people to manage inventory. She filed patents and designed the company's logo. She wrote press releases and coordinated trade shows. She helped the company grow from zero revenue to $50 million in three years. And she was a key negotiator in selling PicoPower to Cirrus Logic Inc.

"They didn't hire me; I hired me," Rogers recalls with a chuckle. "This group didn't have fabulous contacts and I didn't have a track record of running a company. But since they were disenfranchised, they let me do what I could do. That was a big opportunity … A lot of companies try to keep things constrained. We were so strapped, I stood up and ate lunch in the hall." She worked 14-hour days, "harder than I have ever worked in my life.

"I certainly was a risk-taker," she adds, "but I didn't jump into that without knowing exactly what I was getting into. I thought the product was very good. I made sure I was taking the right risk."

After PicoPower was sold, Rogers stayed with the firm to help oversee its integration with Cirrus Logic. She decided in 1995 to quit and take a year off, during which time she wrote a business plan for one entrepreneur, raised venture capital in Asia for another, and spent time with her two young children, born 17 months apart. In 1996, she returned to work full-time, opening an office in Palo Alto, Calif., for J.& W. Seligman & Co., a New York-based mutual fund company. Today, as vice president and investment officer, she is on a team that manages a $4.5 billion high-tech fund.

Carolyn A. Rogers



Dwight K. Morita, WG'77, likes to quip that his entrepreneurial bent is genetic. His father owned a plumbing-supply business in Hawaii. Morita's grandfather, who had been born in Japan, picked up extra cash by distilling bootleg rum in the Hawaiian cane fields.

In 1986, Morita, who was then at General Electric Co., was one of seven people who started Synopsis Inc. in Research Triangle Park, N.C. Six engineers at GE's Microelectronics

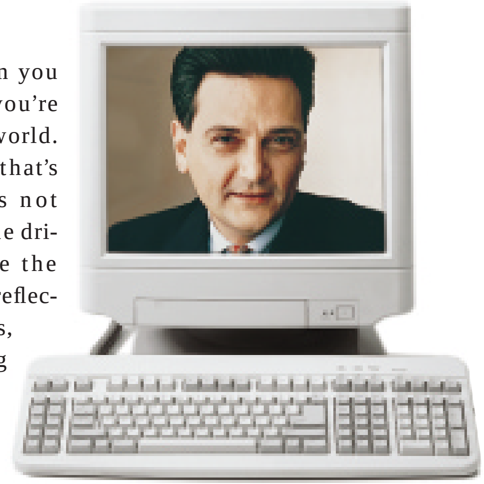
creation of new industries and the collapse of old ones, much of that is driven by technology. In the financial services industry alone, the cost of consumer-oriented financial services is clearly plummeting with the rise of the Internet. It's at the inception, but the trajectory is clear. Middlemen will be eliminated as new opportunities are created for individuals."

Given the almost limitless possibilities suggested by new uses and applications, Gerrity asks, how does a manager weave technology into the fabric of an organization, both internally and externally, in ways that exploit the technology's ability to create value?

Some of those answers can be found in the new approaches to managing technology that are a focal point of faculty research throughout the School, Gerrity says.

Current research topics include, for example: the role of information technology on productivity in the U.S. retail banking system; the nature of technological change on wireless communication; global technology and its impact on national markets and nation states; electronic commerce; the need for consumer protection in the global information infrastructure; the management of technological change; how electronic commerce will influence the relationship between suppliers and retailers; and electronic commerce's effect on business-to-business marketing.

Technology, especially information and communications technology, "has already become an everyday tool within many organizations, including ours," William L. Larson

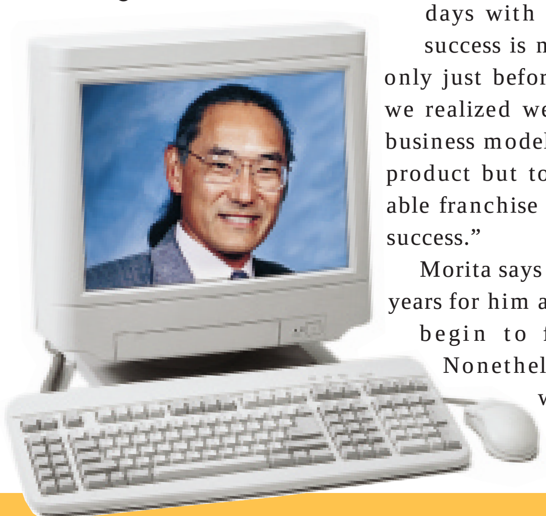


Center received the company's blessing and a loan to commercialize "logic synthesis" technology — software that could be used by companies to design and manufacture integrated circuits. The engineers had developed the technology at GE after the company stopped funding the research.

Morita, who had joined GE in North Carolina after stints at Intel and National Semiconductor Corp. in California, was approached by Aart de Geus, head of the engineering team. De Geus asked Morita to develop a business and financing plan for the new company, which was then known as Optimal Solutions Inc. Morita's first role was as chief financial officer. He then became vice president of corporate development, focusing on strategy and mergers and acquisitions.

The company, which began with seed money and nine employees, had $22 million in revenues and 138 employees by 1990. Along the way, Synopsis continued to grow, partly by acquiring or merging with other firms. For its 1997 fiscal year — 10 years after it moved from North Carolina to Mountain View, Calif., its present home — Synopsis had revenues of $500 million and more than 2,100 employees. Today, it is a leader in providing products and services for designing complex electronic systems and integrated circuits.

Dwight K. Morita



"You're always on edge," is how Morita recalls his early days with the start-up. "Your success is never assured. It was only just before going public that we realized we had a sustainable business model. It's easy to hit one product but to develop a sustainable franchise is a real measure of success."

Morita says it took three to four years for him and his colleagues to begin to feel comfortable. Nonetheless, the experience was "the ultimate excitement, because when you start a company it's like you're working to change the world. For many entrepreneurs, that's the driver. The driver is not making a lot of money. The driver is wanting to change the world." After a moment's reflection, he laughs and says, "Of course, I'm not going to turn the money down either."

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Brandon Watson, W'96, WG'97, and four classmates in a management course taught by Ian C. MacMillan, George W. Taylor Professor of Entrepreneurial Studies, started a firm called 5 Spot during their senior year. The students developed network-load-balancing software, a product that allows computer users to continue working without disruption if other parts of a network go down.

"I wrote the initial memo and pitched it to my buddies," recalls Watson, 23, who graduated from Wharton's Jerome Fisher Program in Management & Technology and submatriculated into the MBA program. "Most of us had technical background. This was fairly easy for us to grasp."

It was never the partners' intention to build a long-lasting company with 5 Spot. Since they had accepted jobs at other companies, the 5 Spotters decided to develop the product and then try to sell it to an established software company.

The business was built solely by sweat equity. "To date, we've put no dollars into this, which is phenomenal," says Watson. "That was one of the lessons we learned from MacMillan: when you can spend no money, do so." The bankers and lawyers advising 5 Spot are friends. Says Watson: "If we sell [the business], they take a certain percentage and a fee."

Gerrity says. "Technological expertise pervades the Operations and Information Management (OPIM) department, for example, but it's also in finance, marketing, public policy and so forth. We are integrating the application and exploitation of technology into the way we teach different disciplines.

"Whether a student thinks about marketing as an area of study or as a specialization, he or she will learn about the use of technology in that field. Electronic commerce alone is a whole new channel for building images, representing products, linking to customers, closing sales, managing transactions — the works. Technology clearly has a huge impact on what we research and teach here."

Information Explosion

From the economist's point of view, the free flow of ideas and knowledge "makes for more and more perfect markets," says Gerrity. "The more efficiently market mechanisms work, the smarter people are about effectively allocating resources.

"But the availability of so much information can have major effects on companies. It makes the world much more transparent in such areas as market research and recruiting. If you are looking for top talent, it is all too easy to go to a company's web page and begin hunting" for who is responsible for what.

Competitors, of course, can access information about your company just as easily. "So if the information is all readily available, then the premium is not on getting the information but on turning it into knowledge that you have com-

The wild west view of entrepreneurship

Ambition and talent are clearly pivotal in making a start-up a success. But is success largely the result of one person's vision or of having a well-tuned management team in place?

"People have this view of entrepreneurs as the great individualists, the Wild West view of entrepreneurship. That's the wrong way to think about it," says Gordon Hull, WG'89, a former colleague of Morita's at Synopsis and now a general partner with CMEA Ventures, a venture-capital firm in San Francisco.

"A better way is that when you have complex systems, you're interdependent with others to bring certain skill sets or experiences to bear," Hull says. "You can have an individual initiate a company, but really it's a group of very talented and interdependent people coming together to build the company and create products and value. . . Typically, the one factor that correlates most highly with success is a management team that has done it before in a similar industry."

A slightly different view is espoused by Ken Schroeder, WG'69, president and chief operating officer of KLA-Tencor Corp. in San Jose, Calif., a world leader of chip-inspecting tools that help semiconductor companies detect and eliminate problems in the manufacturing process.

"The common element in success is one person who is the visionary for the business," Schroeder says. "I've seen companies with good and bad management teams, and they can both be successful. I've seen companies with everything going for them that fail. I've seen companies undercapitalized. But if a company has one guy or woman who really understands the market, and sees a problem and is able to choose the winning technical solution from a cost-performance point of view, that's usually the key."

Broderbund's Durrett believes some technology start-ups hurt their chances for success because they don't focus enough attention on customers.

"Increasingly, the most important element [in success] is not technology, it's knowledge of the consumer. This is oft repeated but not oft followed," Durrett says. "If you think, 'If we make it, they will use it,' you're in deep trouble. But if you're in a situation where 'They need it and we can make it,' you're going to win."

Authann Quindlen

John Dean, WG'74, president and chief executive officer of Silicon Valley Bancshares, a Santa Clara, Calif., firm that provides financing to emerging growth technology and life sciences companies, sums up the key to success this way: "People, people, people. You have to have a good product. There has to be an eventual market need. But great ideas and great products fail because of people.

"What you would hear in the Valley, from venture capitalists and others, is that management of people is so important," adds Dean. "It happens every day: Venture capitalists will come in [to a fledgling firm] and say, 'The concepts are there, but you need new management to succeed.'"

Identifying a growth market

McAfee's Larson offers this perspective on what it takes to launch and build a company: "It's easier to surf a wave than thread a needle. If you pick a high-growth market, you can make mistakes and do well. Identifying trends is the most

mand over and that you manage effectively."

Although the business community is just beginning to "understand high performance learning organizations — those with an open values-based culture that encourages innovation — Wharton itself has already made progress adapting to this increasingly technological age," says Gerrity.

For example, prospective students can apply on-line to the school's MBA and WEMBA programs and verify online the status of their applications through the admissions process; students on campus use an auction system, developed on a web-based JavaScript application, for selecting courses according to individual priority; recent graduates are connecting to the School and each other through lifelong email; the Career Development & Placement Office offers all its resources on-line, including an alumni database, job positions and details on how to create a resume. Links are available to company home pages and job information sites.

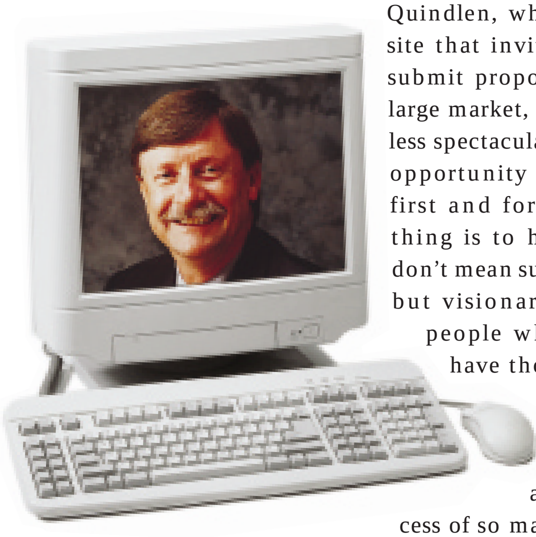
As for the 69,000 Wharton alumni worldwide, "we are in the middle of enhancing our virtual community — a secure and searchable web-based communication system that will offer both contact and calendar information," says Gerrity. "There will be increased networking opportunities for career development and community building, and new ways to reconnect with the School.

"Technology no longer belongs to the specialist," he says. "It's a brave new world for everyone."

critical thing. Behind that, you want to have a business model that generates cash, because cash is king when you're young. You don't want to rely on external financing. The third factor is culture. You have to set a direction and have leadership and layer in processes to allow people to achieve their potential. True leaders empower ordinary people to do extraordinary things."

Quindlen of Institutional Venture Partners, who personally investigates thousands of possible investments a year but actually puts money into only two or three companies, confirms Larson's view. She says her company looks at several factors before deciding to funnel money to a start-up.

"The first thing we look for is a huge market," says Quindlen, whose firm has a Web site that invites entrepreneurs to submit proposals. "If you have a large market, you can still perform less spectacularly and still have an opportunity [to succeed]. That's first and foremost. The second thing is to have great people. I don't mean super-seasoned people, but visionary, market-oriented people who can lead. If you have those ingredients, your chances for success increase tenfold."



Ken Schroeder

Several alumni agreed that the success of so many technology firms has led to a problem — a shortage of qualified people to fill positions needed to help companies in the Valley grow. Notes Hull of CMEA Ventures: "These businesses are growing so quickly they're outstripping the labor force."

Still, the alumni say the Valley remains a superb place – if certainly not the only place — to launch a company. For one thing, there is an infrastructure of experienced venture capitalists and related legal and financial experts. In addition, the Valley is home to some valuable intangibles that may be scarcer in the more buttoned-down East.

"There's an attitude about entrepreneurs being at the top of society's food chain here," says Hull. "There's that frame of reference that says to talented young people that a good thing to do is become an entrepreneur as opposed to a doctor or an investment banker — or a venture capitalist, for that matter."

No one, of course, likes to bungle a start-up. But Hull notes that Valley entrepreneurs are risk-takers, and the prevailing Valley attitude is that you can accept and learn from failure. Hull says one entrepreneur he has worked with "has had six great successes and one huge failure. But that failure didn't stop him from starting another business."

Hot Areas and Good Advice

Alumni offered opinions on a few areas of technology that show the most promise going forward.

Computer networking is "huge" because there's "such an opportunity to become acquired within a 12- to 18-month window," Quindlen says. "We are heavily invested there." Quindlen also likes firms specializing in electronic commerce and security.

"Software for networks has been a great area," says Schroeder of KLA-Tencor. "Computing has been getting cheaper and cheaper and that trend will continue."

Internet-related companies "will have a significant impact on the way we do business in the United States at the consumer level," says Dean of Silicon Valley Bancshares. "I can't tell you how it will end up but there's a richness of creativity there."

As for advice to would-be technology entrepreneurs, "talk to customers," says Quindlen. "It's much better to come to [a venture capital firm] with some kind of picture from customers on how they would use the idea you're thinking of creating. The second thing is be bold. These rewards do not go to the meek."

"Spend a lot of time trying to network and getting to know people of like mind who want to start a company," Schroeder says. "Keep an eye out for that visionary or try to become one yourself." In addition, "Hang onto the equity of the company … I think a lot of companies end up giving too much away, whether to venture capitalists or someone else."

Synopsis' Morita says the most important skill missing in the Valley is marketing. "I'm talking strategic marketing, strategic thinking," he says. "There's no lack of technology. The biggest difference I see in making a successful company is having the right technology and the right marketing outlook."

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What's up these days with Watson, Rogers and Morita?

Watson is trying to sell his start-up and working full-time for Microsoft as product manager for digital television. "We're changing the future of television," he offers. "I'm trying to figure out what TV of the future is going to look like, how we're going to bring it to the masses, how the TV and computer will interact, and how these new forms of communication and entertainment might take shape."

Rogers says she's thrilled to be with J. & W. Seligman, but doesn't rule out the possibility of someday getting involved in another start-up. "In a heartbeat I'd do it again," she says. "It was such a good decision [to join PicoPower]. It wasn't

Continued on page 28

This story was written by Stephen J. Morgan, a Philadelphia area freelance journalist and former director of media relations at Wharton.

FEATURE

Wharton's Alumni Leadership In Asia

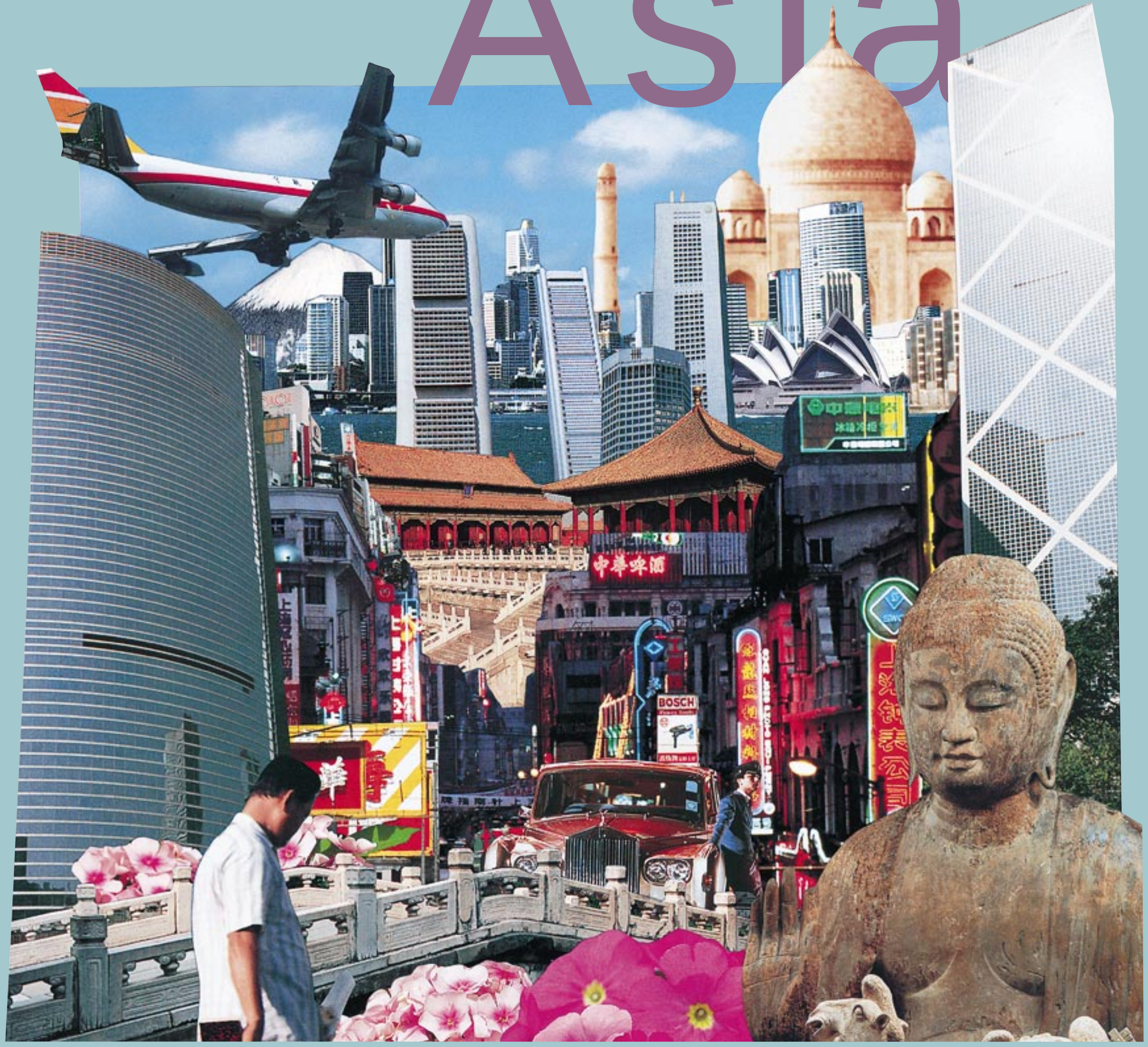


ILLUSTRATION / PIERRE-PAUL PARISEAU

Despite economic woes that have beset parts of Asia over the past few months, the region still offers the promise of rapidly expanding markets and new global alliances.

The 2,400 Wharton alumni working in Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the People's Republic of China, the Philippines, Singapore, Taiwan, Thailand, Vietnam and Australia are part of Asia's future. Many are in positions of leadership at a time when executive ability is being tested like never before by volatile currencies, regional recessions, new competition, deregulation and privatization, to mention a few of the more prominent trends.

In the following pages we asked 15 alumni to identify the major challenges facing their companies over the next five years, the attributes they think characterize effective leadership, notable regional business trends and favorite restaurants and hotels.

Through these individual interviews we offer a glimpse of Wharton's alumni leadership in Asia.

Laurence Za Yu Moh, WG'53

Job Title: Chairman, Plantation Timber Products, Singapore

Principal Responsibility: Creating the vision for the company, overseeing the development of corporate strategy and providing guidance and mentoring to top management

Line of Business: PTP is China's largest integrated wood products company, with all production oriented to China's large domestic market

Major Challenge Over the Next Five Years: Establishing a national marketing and distribution system which will effectively enable us to achieve both the market share and the premium position that our superior quality deserves

Attributes of Effective Leadership: Ability to evaluate people; willingness to delegate; insights into evaluating risks

Most Notable Regional Business Trend: The emergence and evolution of China as a huge market economy. This development is immense, incredibly rapid and will have far-reaching effects. The key requirement for effective development is managers ... It is particularly exciting for me to participate in this phenomenon as I spent the first 22 years of my life in China ...

Favorite Restaurants in Singapore: Lei Garden (Chinese) and Les Amis (French)

Favorite Hotel in Singapore: Ritz Carlton

Tony Perkins, WG'88

Job Title: Principal, McKinsey & Co., Beijing

Principal Responsibility: Building McKinsey's practice in China to provide top management of leading Chinese state-owned enterprises (SOEs) and major multinational corporations (MNCs) with strategic, operational and organizational counsel

Line of Business: Management consulting

Major Challenge Over the Next Five Years: Retaining sufficient talent in China's dynamic and competitive economy to fully meet burgeoning client demand. Due to the Cultural Revolution, large MNCs have a difficult time finding middle managers for strategic planning, finance, marketing and general management positions. McKinsey's early-tenure Chinese associates are an attractive source of talent that is much less expensive than expats

Attributes of Effective Leadership: First is focus. Second is inspiration. Emerging from 30+ years in a communist system, middle managers in Chinese SOEs are reluctant to assume accountability. As a result, organizational change comes slowly. Leaders are able to inspire initiative-taking throughout an organization. Third, values. The PRC economy and Chinese SOEs are plagued with corruption from the blatant to the borderline, and many managers look the other way. But leaders communicate standards and then exemplify corporate and personal values in every interaction

Most Notable Regional Business Trend: The most notable trend in Asia not yet widely recognized is the emerging internationalization of China's leading enterprises, such as CITIC, COSCO, Baoshan Steel and Haier. Over the next 5-25 years, such companies aspire to be on the global Fortune 500 — a "third wave" of Asian-based MNCs behind Japan (such as Sony and Matsushita) and Korea (Samsung and LG)

Favorite Restaurant in Beijing: Lulu's

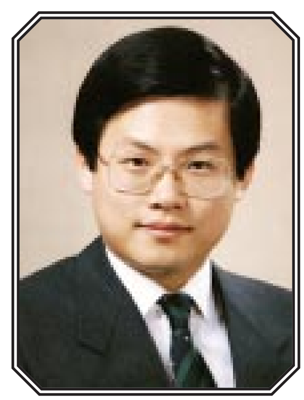
Favorite Hotels in Beijing: Palace Hotel, ChinaWorld

Jwa-Jeen Choi, WG'80

Job Title: President & CEO, Suttong Corp., Seoul

Principal Responsibility: To successfully reinvent a 43-year-old manufacturing company into a growth company in the information age

Line of Business: Batteries, plastics and pressure-sensitive adhesive products, household and consumer healthcare products, medical systems



Major Challenge Over the Next Five Years: To keep a leadership position in our niche business categories through technology-based differentiation and lowest-cost structure

Attributes of Effective Leadership: Flexibility and adaptability to changes in environments, technologies, competitive structures and consumer behaviors

Most Notable Regional Business Trends: Global competition from global players who are armed with sophisticated management skills, well-recognized brands and strong financial muscles; financial instabilities and weak financial institutions throughout the region; westernized consumer behavior and rising spending in luxury goods

Favorite Restaurant in Seoul: Palsun (Chinese)

Favorite Hotel in Seoul: Grand Hyatt

Chester Koo, WG'79

Job Title: President, China Life Insurance Co.; Chairman, Cycloria Inc.; Chairman, Videoland Inc., Taipei

Principal Responsibility: To manage Koos Group China Life Insurance Co. and to supervise the group's telecommunications business (multiple cable system operation, satellite uplink, cable system construction, cable TV networks, cable TV ad sales)

Line of Business: Life insurance, advertising, public relations, direct mail sales, satellite and cable TV, telecommunications

Major Challenge Over the Next Five Years: Continuing liberalization and internationalization of Taiwan's economy, which leads to fiercer competition from overseas

Attributes of Effective Leadership: Modesty, which on the part of the leader can lead to harmony and unity within the company; honesty, which builds credibility among clients; foresight, which allows a leader to either take the initiative or take protective measures in advance

Most Notable Regional Business Trends: Deregulation and privatization

Favorite Restaurant in Taipei: At the Ambassador Hotel

Favorite Hotel in Taipei: Grand Hotel

Mirzan Mahathir, WG'87

Job Title: Group Executive Chairman, Konsortium Perkapalan Bhd., Kuala Lumpur

Principal Responsibility: To provide leadership to the group by formulating a realistic vision, developing short and long-term objectives, building and motivating an effective team that can implement policies that will result in the group achieving our objectives

Line of Business: Multi-modal logistics service provider. We are focusing on providing the expertise and resources to design and implement effective inventory management systems for companies. This involves using the company's and our own transportation and storage assets to smooth the flow of in-bound and out-bound inventory. We operate in ASEAN, South Asia and South Africa and are looking to cover the entire Asia-Pacific region as well as the Indian Ocean rim countries

Major Challenge Over the Next Five Years: To position the group to compete effectively as markets deregulate, infrastructure improves, new competition emerges and technology develops

Attributes of Effective Leadership: Listen well, act decisively, behave ethically always

Most Notable Regional Business Trend: As companies concentrate on developing their skills and expertise in product development, the manufacturing process and marketing, they look to outsource certain functions to specialist organizations. They stand to gain through better and more cost-effective service and better utilization of resources. Distribution is one such area. In Asia, the cost of distribution is high. Companies that can lower the cost of distribution, or better still, work on reducing their client's cost of inventory, are best placed to benefit from this trend.

Favorite Restaurant in Kuala Lumpur: Mango Tree

Favorite Hotel in Kuala Lumpur: Equatorial Hotel

Gu Dunqing, AMP'91

Job Title: Director of the Board, Executive President, Shanghai International Trust & Investment Corp., Shanghai

Principal Responsibility: In charge of investment banking division, fund investment division, and international trading and consulting division

Line of Business: The company is a financial institution but covers other industries as well, including real estate, international trading and investing

Major Challenge Over the Next Five Years: As the Trust Law is promulgated in the near future, the company has to adjust to the trust and investment banking business

Attributes of Effective Leadership: Creativeness; persuasiveness; perseverance

Most Notable Regional Business Trend: The stock and M&A markets will develop more rapidly because of the reformation of state-owned-enterprises

Favorite Restaurants in Shanghai: Gap (Jin-Ting) for Chinese; Jax for Western cuisine

Favorite Hotels in Shanghai: Sheraton-Hua Ting and Holiday Inn

Kongkiat Opaswongkarn, WG’80

Job Title: Founder, President and CEO, Asset Plus Securities Co., Ltd., Bangkok

Principal Responsibility: In charge of overall operations of the firm, with an emphasis on marketing

Line of Business: Investment banking — domestic and crossborder, M&As, restructuring, new listing sponsorship, fundraising, general advisory; stockbroking and research; investments, both direct and portfolio investment

Major Challenge Over the Next Five Years: Maintaining efficiency of operations and the entrepreneurial spirit of the company as the business grows. These are key factors that will help us compete successfully against large international investment banks and securities houses

Attributes of Effective Leadership: Vision and the ability to transfer that vision to others; human resource management; risk taking

Most Notable Regional Business Trends: Further consolidation within the region and more crossborder deals among Asian companies

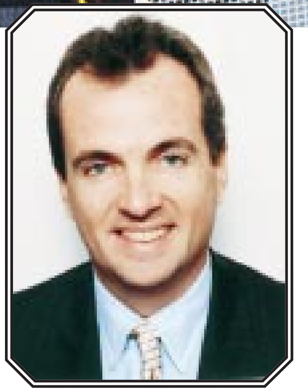
Favorite Restaurant in Bangkok: The Golden Lotus

Favorite Hotel in Bangkok: Regent

Philip D. Murphy, WG’83

Job Title: President and Managing Director of Goldman Sachs (Asia) L.L.C., Hong Kong

Principal Responsibility: Overseeing Goldman Sachs’ activities in Asia, outside of Japan



Line of Business: Full-service investment banking and securities firm

Major Challenge Over the Next Five Years: Balancing global expertise with local knowledge

Attributes of Effective Leadership: Honesty; clear vision; leadership by example

Most Notable Regional Business Trend: Funding Asia’s macroeconomic growth and infrastructure requirements

Favorite Restaurant in Hong Kong: La Bodega

Favorite Hotel in Hong Kong: The Regent

Hiroshi Tsujimura, WG’73

Job Title: Director & General Manager, The Nomura Securities Co., Ltd., Tokyo

Principal Responsibility: Risk management

Line of Business: Securities brokerage & investment banking

Major Challenges Over the Next Five Years: Competition with overseas investment banks in Japan; competition in the global market with major world players

Attributes of Effective Leadership: Vision; clear message; balanced strategy

Most Notable Regional Business Trend: Deregulation of Japan’s financial and capital markets

Favorite Restaurant in Tokyo: Kikuya

Favorite Hotel in Tokyo: Four Seasons

Lance Yu Gokongwei, W’87

Job Title: Executive Vice-President, JG Summit Holdings, Inc.; Executive Vice-President & General Manager of Branded Foods Division (Universal Robina Corp.), Quezon City

Principal Responsibility: Manage URC branded consumer foods unit — the Philippines’ largest snack, chocolate and candy manufacturer — and Cebu Pacific Air, the Philippines’ first low-cost airline and now its second largest and fastest growing

Line of Business: URC — branded consumer foods; Cebu Pacific Air — low fare airline; JG Summit — holding company in food, banking, textile, property, cement, telecom, petrochemical and air transport business

Major Challenge Over the Next Five Years: Looking for and developing management team and company culture that will enable company to achieve continued revenue and profitability growth, particularly in volatile Southeast Asian environment

Attributes of Effective Leadership: Creating and communicating clear vision and culture; developing strong, dedicated management team; staying focused while remaining receptive to innovation and new ideas

Most Notable Regional Business Trend: Increasing competition in all businesses due to globalization/information/ deregulation

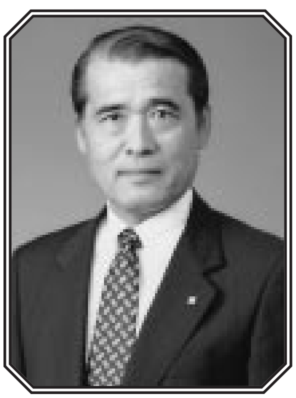
Favorite Restaurant in Quezon City: Flavors and Spices (Thai)

Favorite Hotel in Quezon City: Manila Galleria Suites

Toshio Iwasaki, WG'70

Job Title: President & CEO, Cresco, Ltd., Tokyo

Principal Responsibility: All



Line of Business: Systems integration focusing on networks and financial applications

Major Challenges Over the Next Five Years: To increase productivity in developing computer software and to recruit enough skilled systems engineers and programmers

Attributes of Effective Leadership: Vision; knowledge of human history; good health

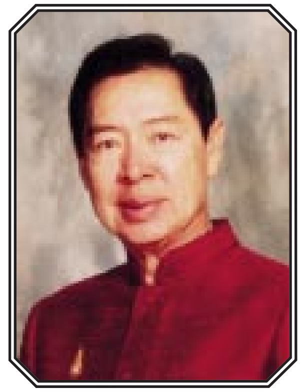
Most Notable Regional Business Trends: Financial deregulation and adaptation to new information technology

Favorite Restaurant in Tokyo: Sushi–Iwa (Tsukiji)

Favorite Hotel in Tokyo: The Palace Hotel

Sukum Navapan, WG'51

Job Title: Group Chairman and CEO, Navatanee Group of Companies, Bangkok



Principal Responsibility: Policy making and long-term planning

Line of Business: Real estate, golf course, investing

Major Challenge Over the Next Five Years: Overcoming current economic recession

Attributes of Effective Leadership: Vision; motivation; good human relations

Most Notable Regional Business Trend: Slow economic recovery from current recession

Favorite Restaurant in Bangkok: Mayflower (Chinese)

Favorite Hotel in Bangkok: Oriental Hotel

Masayuki Matsushita, WG'70

Job Title: Executive Vice-President, Member of the Board, Matsushita Electric Industrial Co., Ltd., Osaka

Principal Responsibility: Responsible for overseas operations and external affairs

Line of Business: Manufacture and sale of electronic equipment, home and industrial electric equipment and appliances, computer and communications, semiconductors and electronic components

Major Challenge Over the Next Five Years: Globalization of our operations

Attributes of Effective Leadership: Ability to place the right person at the right post; insight and knowledge from a long-term and global point of view

Most Notable Regional Business Trend: Development of a more borderless and globally harmonized business environment

Favorite Restaurant in Osaka: Kiccho

Favorite Hotel in Osaka: Rihga Royal Hotel

Wang Xi, WG'47

Job Title: Vice President, General Reinsurance Corp., Shanghai Representative Office, Chief Representative, Shanghai

Principal Responsibility: Explore China market

Line of Business: Reinsurance

Major Challenge Over the Next Five Years: To obtain operating license from the Chinese government, to upgrade staffs and to acquire a major share in China's reinsurance market

Attributes of Effective Leadership: Farsightedness, integrity, prompt and decisive action

Most Notable Regional Business Trend: China will continue its high growth rate (9–12 percent a year), U.S. investment in China will increase and China-Hong Kong-Taiwan will become one of the world's great economic centers

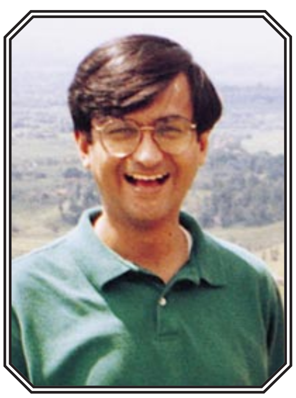
Favorite Restaurant in Shanghai: Mei Long Zhen

Favorite Hotels in Shanghai: Portman, Hilton and Garden Hotels

Anil Kumar, WG'83

Job Title: Director, McKinsey & Co., New Delhi

Principal Responsibility: To build a pre-eminent position for McKinsey in India by achieving sustained impact for clients; and to provide leadership and direction in the firm, helping build McKinsey in such a way that the institution has long-lasting impact on society, the economy and business enterprise



Line of Business: Focusing on helping think through and resolve the issues faced by top management in terms of strategy, operations improvement and redesign, and organizational performance

Major Challenge Over the Next Five Years: To evolve rapidly enough that we continue to be the sort of exciting and stimulating place that attracts talented individuals. We need to ensure that such people continue to be attracted to the firm, develop in the firm and become future leaders of the firm

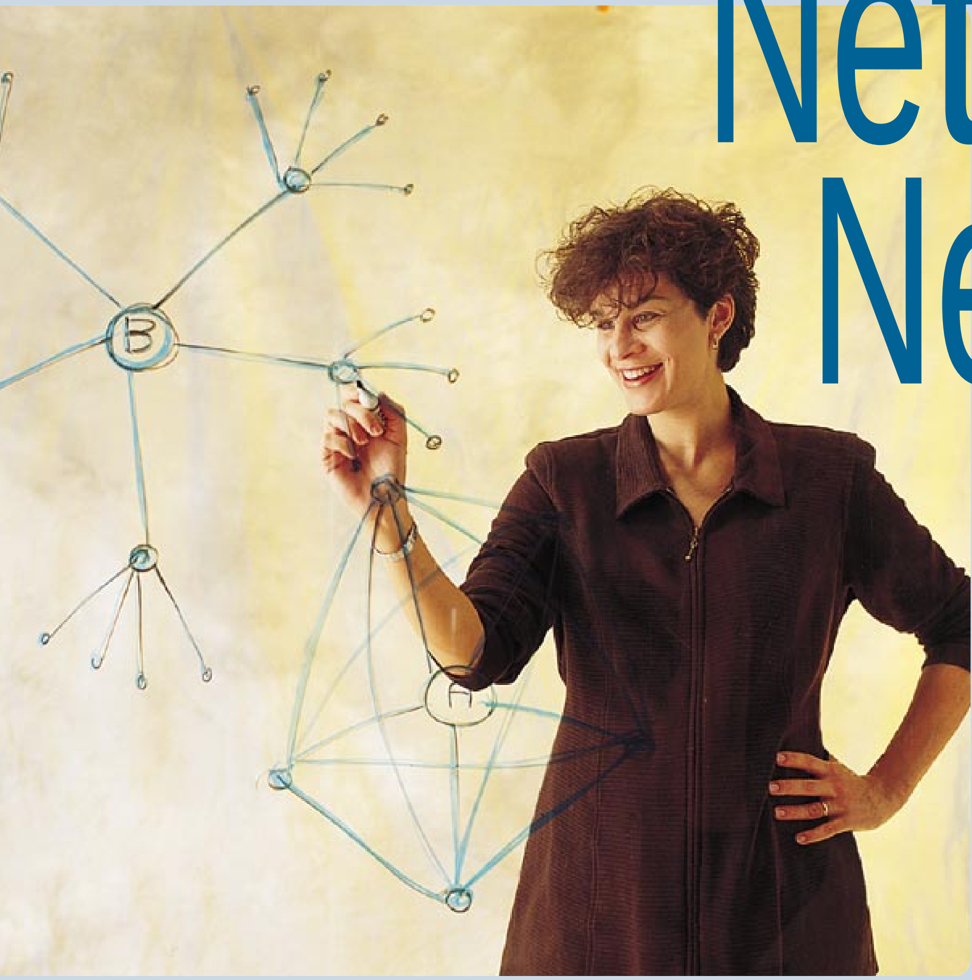
Attributes of Effective Leadership: A strong belief that something can be made from the raw material, that you can make a difference; perseverance, focusing on the goal but enjoying the path that takes you there; concern for people. I bond to my clients because of who they are as human beings. I find it very difficult to serve them well without this

Most Notable Regional Business Trend: The increasing number of mergers and acquisitions. This activity could quadruple over the coming decade to more than $100 billion. This will come about because of the convergence of several forces: 1) deregulation of the Asian capital markets as a result of structural over-capacity in a number of industries; 2) the continuing trend towards privatization and disinvestment; 3) the restructuring of family-owned businesses and conglomerates; 4) the consolidation of highly fragmented supply bases

Favorite Restaurant in New Delhi: Blue Elephant

Favorite Hotel in New Delhi: The Oberoi

FEATURE



Network News

MANAGERS WHO AGGRESSIVELY PUSH NETWORKING INITIATIVES IN THEIR FIRMS AND INDUSTRIES COME UP WITH NEW PRODUCT IDEAS MORE OFTEN — AND WITH BETTER RESULTS — THAN THOSE WHO DON'T, SAYS PROFESSOR LORI ROSENKOPF

PHOTOGRAPH / PETER OLSON

In December 1992 at JFK Airport, Lori Rosenkopf took her first step into a flight simulator used by TWA to train commercial pilots. It was an opportunity to experience firsthand the multi-million dollar machines that she would eventually feature in an article entitled, "The Coevolution of Community Networks and Technology: Lessons from the Flight Simulation Industry."

But on that particular day six years ago, Rosenkopf's attention was focused on the cockpit. "The instructors handed me the controls and said to go ahead and give it a try. They didn't tell me that you are supposed to turn the wheel away from the direction you want to go in. I taxied along thinking I was turning left, but instead was turning right. I basically drove the plane off the runway."

While Rosenkopf travels on airplanes these days strictly as a passenger, she is no stranger to the intricacies of technology. She earned bachelor's and master's degrees in engineering from Cornell and Stanford, and spent six years in the 1980s working at Eastman Kodak Co. as an industrial engineer and at AT&T Bell Labs as a systems engineer.

"When I was in school I thought I understood how companies selected one particular technology over another," she says. "Engineers would do problem sets where they compared alternative approaches according to very strict performance measures, such as stress level or throughput. The technology that had the best results won. But once I started working I saw that engineers aren't trained to consider the social, organizational and/or political ramifications of a particular approach and how these factors can affect the technology's ultimate success.

"Engineers like to think that it's obvious which technology is the best, but it's important for managers/engineers to understand how many other harder-to-measure factors enter into that decision."

Rosenkopf, the Douglas Vickers Term Assistant Professor of Management, went on to get her PhD from Columbia in 1994 in the management of organizations. Since then, her research has focused primarily on the kinds of communications networks that exist within and between firms in a particular industry and the ways in which these networks influence the transmission of knowledge, the creation of innovation and the development of technology.

She has studied four high-tech industries — semiconductors, optical disc, cellular and flight simulation — looking specifically at the organizational factors that affect how people choose, measure and compare one technology over others.

To illustrate the role that networks play in these processes, Rosenkopf sketches out a diagram showing two types of workgroups. In the first example, person A's network consists of links to five individuals within the company. Each of these five also has networking links, but they are all to each other. The result is a clique, in which each person shares information with members of his or her team, but typically doesn't look outside for additional data.

Person B is also connected up with five people, but these five individuals have links to others outside the group, perhaps in another department, an industry trade group or a community organization. So instead of receiving redundant information from five people, as A does, B has 20 different streams and flows of information. "Managers in situations like these tend to be the ones who come up with ideas for more innovative products and services," says Rosenkopf.

"Engineers like to think it's obvious which technology is the best, but it's important for managers/ engineers to understand how many other harder-to-measure factors enter into that decision."

Most work groups, of course, tend to fall somewhere between these two extremes. And setting up these networks takes time, intention and the ability to create new ways to link up with information sources both inside and outside the firm.

"Everyone knows this is what managers are supposed to do," says Rosenkopf, "and in some venues, such as sales, this approach is institutionalized as part of the job. But if you are an engineer, or an R&D manager or even a top executive, there are so many issues competing for your attention that when push comes to shove you become very involved in your own products and processes."

For engineers and technical managers, network links can be established through participation in cooperative groups like standards bodies, task forces, industry-wide committees and government organizations. On a broader basis, companies can create whole new networks of learning through alliances, through encouraging mobility in the engineering and executive ranks, through common directors and through social networks that emerge informally, such as the afterhours fraternizing that is an integral part of the work culture in places like Silicon Valley.

Firms that have these kinds of networks — bridging relationships as opposed to cliques — not only tend to conceive of new product ideas more often, says Rosenkopf, "but just as important, they are more successful in getting others to buy into their ideas." Consider flight simulation.

Navigating New Technology

In the flight simulation industry, Rosenkopf says, a very small number of firms produce full flight simulators (FFSs) and flight training devices (FTDs). Full flight simulators typically cost $15 to $20 million each, replicate the flight experience by integrating cockpit instrumentation with full motion and visual capability, and during the 1980s were supported by commercial airlines, regulatory bodies and aircraft manufacturers. The flight training devices cost $1 to $3 million each, have no motion or visual capabilities and were supported by academic and military researchers, regional and general airlines and flight schools.

"Because these are very expensive, customized machines that are closely overseen by federal regulators, it's an arena where you don't have a bunch of engineers going off to some skunkworks R&D lab figuring out what to do, building it and then hoping it sells," Rosenkopf says. "Rather you have a whole community of people involved in the process — the simulator manufacturers, the airplane manufacturers (McDonnell Douglas, Boeing, Airbus), government regulators and the users/customers (commercial airlines). They all care very deeply about what the simulators should do, and how they should be used to demonstrate that the pilot is truly proficient. Consequently there are many networks and linkages even among players who are competitors. Everyone ultimately has to agree on the product because otherwise you are investing millions of dollars building something for which there might not be a market."

Rosenkopf's goal in studying the flight simulation industry was to show how interorganizational linkages led to the dominance of full flight simulation approaches (FFS) over modular approaches for more than 15 years.

She identified 27 different groups involved in the process, including trade associations, professional societies, suppliers, standards bodies, regulators, governmental bodies and manufacturers. They ranged from the International Air Transport Association Flight Simulation Technical Committee and the American Institute of Aeronautics and Astronautics Working Group on Simulation Facilities to the Wind Shear Working Group and the Royal Aeronautical Society International Simulation Standards Working Group.

"My research showed that it was the same people over and over again — a core of about 15-20 individuals — who were on many of the committees and therefore were defining what the industry would do, what the product would look like, what the rules would be," Rosenkopf says.

"By drawing lines between all the different groups I was able to define this dominant coalition which, it turns out, was fighting for the far more expensive FFS approach over the less expensive FTD. Members of this coalition were very organized, always pushing the same agenda, meeting at the same forums in different cities, and so forth. Their collaboration really propelled the choice of FFSs. It meant that the $15 to $20 million machines were the ones built for pilot training back in the 1980s, even though the benefits of using FTDs may have been greater, both in terms of improved pilot training as well as lower training costs which would ultimately translate into lower-cost airplane tickets for the public.

"You could conceive of better approaches for training pilots that used both FTDs and FFSs but that didn't get accepted, not because they weren't good but because they didn't have a coalition of broad network support."

Interestingly, by the early '90s, Rosenkopf says, some of the groups that hadn't been part of the main coalition or clique, and that typically didn't communicate outside their own small network — such as flight schools in the middle of Nebraska that trained pilots for the regional airlines rather than the big commercial players — began to talk together and slowly build new groups. Eventually they forced the other coalition to recognize that there might be circumstances where the $1 million devices are preferable to the $20 million ones. Today, hybrid systems that use both FTDs and FFSs are being explored by the industry.

"Networks affect technology and technology affects networks," says Rosenkopf. "Even after there is closure on a dominant design, firms must still consider how network dynamics may trigger or hinder the next technological change."

Adhesives and Laundry Detergents

If you look at any technology, Rosenkopf says, you see that ultimately, over long periods of incremental improvements, there is some dramatic advancement, something that fundamentally transforms the industry. Vacuum tubes, for example, gave way to semiconductors, mechanical watches to quartz watches, x-rays to catscans to magnetic resonance imaging.

The big question, of course, is which ideas to pursue. "In hindsight there is always a right answer. For me, that's when I fall back on these ideas of networks. Your job as a manager is to establish the bridge networks that give you more multifaceted views of your technology options which then allows you to make wiser choices."

Rosenkopf recalls a recent meeting with the technology director of the adhesives technologies center at 3M. "His job, he told our group, wasn't to figure out what particular variant to pursue with respect to adhesives, but rather to encourage people in the organization who normally don't converse with each other to begin interacting on a regular basis. Much of 3M's philosophy is focused around setting up task forces, councils, different sorts of environments where people from domains that usually don't intersect are now crossing paths and sharing information. Managers are looking to create these unique combinations of knowledge that don't naturally occur."

Rosenkopf cites Procter & Gamble as another example of a company that is continually looking to expand its frontiers. "P&G's Tide laundry detergent comes in powder and liquid form and both are very successful," she says. "But P&G didn't just sit back and say they are going to make increasingly whiter and brighter liquid and powder. One of their experiments is with a product called Tide sheet. It's all-in-one laundry care that goes into a wash, releases detergent and fabric softener, and then goes into the dryer and prevents static cling. The only thing it doesn't do is remove your laundry and fold it.

"It sounds like a great idea. But the company has to think about a lot of side issues, such as the effect of such a product on related businesses like fabric softener as well as the potential cannibalization of Tide powder and liquid.

"What has happened so far, however, is that the company can't get the product to work. It keeps burning up in the dryer. But P&G isn't giving up. They are still experimenting with this and with all sorts of other approaches such as capsules, pellets and sponges. They are also looking into technology that would allow consumers to essentially dry clean garments at home, and they are researching fabrics that would repel dirt more effectively than current materials.

"P&G knows that 19 out of 20 experiments are going to be total failures, but they also know that the five percent that aren't will be the seeds of their future business. And better that they are cannibalizing their own products than have Unilever figure out new technology ahead of them."

> "Firms can end up in what is sometimes called a competency trap. They are very good at doing what they do but they start to drift away from the path that the majority of players are focusing on."

The Microsoft Factor

Two years ago Rosenkopf began a study of inter-firm learning among start-ups in the semiconductor industry, analyzing how both formal mechanisms (such as alliances) and informal mechanisms (such as the inter-firm mobility of engineers, geographic proximity and technological similarity) help process knowledge that other firms are also generating. Patent citations are a major component of her research.

"Patent citations give you a view into the kinds of knowledge that a firm has built upon in order to create new knowledge, similar to the way that academic citations show all the different influences on a scholar's intellectual development," Rosenkopf says. "If I'm looking at patent no. 5,200,536, and that cites back to patent no. 4,307,232, I can look up that old patent, see which firm produced it, where they were, what inventors were involved and so forth. In addition, patents can give you a little window on what a particular company might be doing five or ten years down the road rather than now, which can be helpful in determining its future product strategies."

Her research shows, among other things, that in the semiconductor industry, firms that enter into alliances tend to do it with firms in the same geographic region that are technologically similar. "It gets back to networking. Everyone is looking at the same bits of knowledge and recirculating them. You would do better to look at firms in different areas with dissimilar technologies in order to create bridges to more unique information," she says.

Start-ups, Rosenkopf points out, typically tend to be as innovative or even more innovative than incumbent firms. In the semiconductor industry, "many of the landmark innovations — including the memory and microprocessor chips — originated from start-ups. How then do firms with limited R&D spending maintain their innovativeness?"

The answer, she says, gets back to the whole issue of the learning behavior of small firms and their willingness to look for external sources of knowledge.

"Firms that take advantage of technological developments at other organizations and don't just focus on core competence or their own particular competitive advantage seem to be the ones that over the longer haul will have more influence on technological development," says Rosenkopf. "Other firms can end up in what is sometimes called a competency trap: They are very good at doing what they do but they start to drift away from the path that the majority of players are focusing on.

"The idea of developing core competencies is very hot," notes Rosenkopf, "but the issue is you can only continue to develop this competence by making sure you are integrating all the developments of other firms. If a company's attitude is that we are the best and we can do no wrong and everyone else will follow us, it falls off the mountain sooner or later ... Technology is so big and broad and moving so quickly that a company has to be monitoring outside developments, figuring how to co-opt those developments into their own business."

The best example of this, Rosenkopf says, is Microsoft.

"There are very few things that Microsoft has invented," she notes. "Virtually all its successes have had their roots outside the company, but by now Microsoft has an array of established platforms and so much money that it can basically pursue whatever it wants to. Its tentacles are everywhere. No matter which technology is up and coming, Microsoft has started to copy it, created an alliance or bought the firm. Most companies don't have that level of resources, and consequently have to pick and choose their networks. In many cases they don't do enough of that exploration. Microsoft has the ultimate B network."

Firms like Netscape, Novell, IBM and Sun Microsystems are all trying to create the same sorts of networks, the same

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Malleable CORPORATIONS

Are Skills in Mergers, Alliances and Rapid Transformation Becoming the Most Crucial Competency for the 21st Century?

The new corporate offices of the SEI Corporation outside Philadelphia have institutionalized a culture of change. There are no walls. The desks and file cabinets are on wheels, connected to power and networks by snaking wire pipelines dangling from the ceiling. The company can reorganize as quickly as a football team can execute a new play. Employees can move their desks themselves across the office — even to different floors through oversized elevators. No interior designers, no space planners, no clawing your way to a corner office. The goal, in the words of SEI founder and CEO Al West, WG'66, is to create "a cultural signal" that everyone has to be prepared to change at any time.

Although change has been a concern of management for decades, today it is more pervasive. Changes used to be discrete events — moving from one model to another. Now change is continuous and the ability to change quickly is seen as a core competency. As companies need to shape and reshape their organizations more quickly and efficiently, skills in change — including handling acquisitions and alliances — are becoming crucial to competitive success.

It's Risky Not To

"When everything is changing so rapidly, the riskiest position is not to change," says Jerry Wind, Lauder Professor of Management and co-author of the forthcoming book, *Driving Change* (Free Press), with former *Fortune* editor Jeremy Main. When change was less frequent, companies focused on finding the right structure. "Now they realize they have to deal with organizational architecture — culture, processes, people, technology, incentives, and vision, as well as structure. They are all interrelated," Wind says. "And because of the speed of change, it is not just architecture but strategy that has to change rapidly."

Corporate change has traditionally been a draining process — in resources and human energy. Managers had to make tradeoffs between rigid efficiency and flexible inefficiency. With change becoming more continuous, managers need to do both. Like SEI's office furniture, they need to put their organizations "on wheels," creating the skills and capabilities to be efficiently flexible. Two areas where companies are developing these skills are in mergers & acquisitions and managing alliances.

Managing Acquisitions and Alliances

Acquisitions used to be the domain of high-powered specialists who were brought in to design and close the deal. Alliances used to be long-term marriages. That was when acquisitions and alliances were occasional events. In today's rapidly moving environment — where acquisition follows acquisition, as industry boundaries shift and networks of alliances are reshaped on an on-going basis, the ability to effectively handle acquisitions and alliances is becoming essential for the firm, particularly in rapidly moving industries such as financial services, defense, telecom and biotechnology.

Managers need to put their organizations "on wheels," creating the skills and capabilities to be efficiently flexible.

"As companies increasingly move from hierarchical approaches to more networked approaches, managing acquisitions and building alliances are becoming a core competency in many industries," notes Harbir Singh, associate professor of management. "Although some companies are quite sophisticated, the average company is probably underprepared for this. I think there will be dramatic winners and losers down the road."

Post-Acquisition Integration is Key

On average, mergers & acquisitions are a wash. Dozens of studies in the United States and abroad have found no evidence of either improved value or performance overall. It is the company's skill at managing the process that appears to determine whether the acquisition is a boon or a bust.

The skills that count most may not be the up-front abilities in valuation and deal-making — the traditional focus of M&A education and research. A recent Wharton study —

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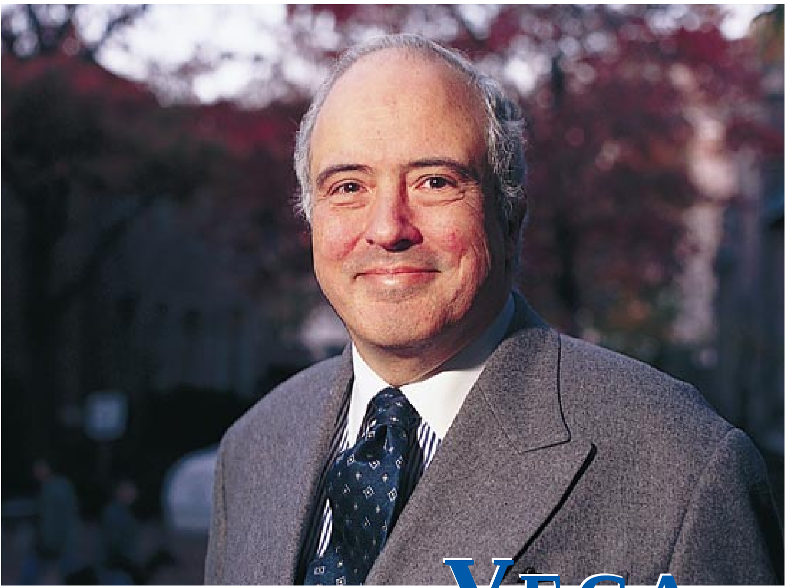
Bernardo Vega, W'59: Promoting the Dominican Republic

Back home, says Bernardo Vega, the Dominican Republic's ambassador to Washington, D.C., "I felt like the head of the mouse. Here I am like the tail of the elephant. Washington is a very big city with many different interests, and I represent a relatively small country. But it's a country that has now gone through a political process which makes it much more attractive to investors."

Accordingly Vega, former governor of the Central Bank of the Dominican Republic, is concentrating on promoting his country's exports and encouraging U.S. investment.

His timing, he feels, couldn't be better. With the presidential election of Leonel Fernandez 17 months ago, the Dominican Republic went from having the oldest president in the hemisphere (age 89) to the youngest (age 43).



VEGA

But more important than the age difference is the change in politics. "We now have a truly democratic regime," says Vega. The president has already made 13 trips abroad as part of the country's efforts to shed its isolationist image.

There is much to promote about the Dominican Republic, notes Vega. Besides its popularity as a tourist destination, the country is a major source of apparel made from U.S. cloth. Raw material is shipped to the Dominican Republic where it is cut, sewn and assembled and then returned to the U.S. as clothing and shoes.

In addition, "we feel our future is to become the back office of North America," Vega says, referring to the many services that are performed in the Dominican Republic — ranging from accounting and data processing to claims handling and clerical work — for American corporations. "When you call American Airlines to make a plane reservation, you are talking to someone in the Dominican Republic," he says. "All these services can be done more efficiently because of the country's excellent communications facilities."

Inside the Beltway, Vega is lobbying hard for what he calls "NAFTA parity. We want the goods assembled in the Dominican Republic, the rest of the Caribbean and Central America to receive the same treatment at U.S. customs as goods coming out of Mexico. Because Mexico is a member of NAFTA (The North American Free Trade Agreement), plants in that country aren't required to pay taxes on goods shipped into the U.S. We are." The NAFTA parity bill has been approved by the U.S. House of Representatives but not the U.S. Senate.

Vega was born in the Dominican Republic, attended school in London where his father was a diplomat, and earned his BS from Wharton. He is well-known in his home country as a scholar, businessman, author and government official. He has been an economics professor at two universities and was affiliated with the Central Bank of the Dominican Republic for 19 years, his last two as governor. He has written more than 40 books on economics, history and archaeology, four of which won the National History Prize. He has been president of the Fundacion Cultural Dominicana, an advisor to the government on reform of its tax laws, a frequent press commentator on the economy and politics of the Dominican Republic, founder of a local industrial consortium, and spokesperson for his country at numerous international economic meetings, among other accomplishments.

But Vega would rather talk about his country than himself. He mentions that the Dominican Republic has 42 major league baseball players in the U.S., and that it is trying to become a "tropical Silicon Valley" spurred on by its burgeoning microchip and electrical goods assembly work.

And last, but not least, cigars. We are the "biggest and best supplier of cigars to the U.S. It's a booming industry," notes Vega, who does not smoke — "I drink rum, that offsets it" — but does attend many of Washington's social functions as a way of promoting what could be his country's most recognized export. "It's true," he says, "that things get done in Washington in smoke-filled rooms."

Beth Starr, W'87: On the A-team in Asset-backed Bonds

Eleven years ago, when Beth Starr graduated from Wharton, it wasn't at all clear that asset-backed bonds would eventually become one of the hottest segments of the securities business.

What a difference a decade makes. "In 1987 the sale of new issues was about $10 billion a year. In 1997 alone, that figure exceeded $200 billion," notes Starr, senior vice president and head of asset-backed research at Lehman Brothers, Inc.

"Even when I was at Wharton, I was interested in structured finance, which includes mortgage and asset-backed securities. It seemed more complex than straight corporate finance," notes Starr, who spent four years in a similar position at Merrill Lynch before moving to Lehman Brothers in 1991.

Asset-backed bonds, Starr says, started out being backed by payments on consumer debt, such as credit cards and auto loans. "But recently we are seeing more complex products backed, for example, by aircraft leasing or utility receivables. As the market has grown, investors have become more comfortable. There was even a transaction last year backed by royalties on David Bowie recordings.

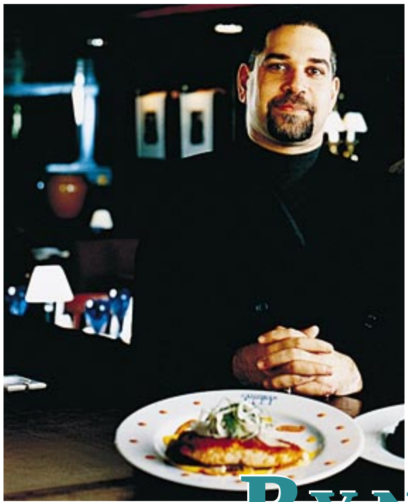
STARR

"Most recently, the new growth sector is the securitization by commercial banks of their commercial lending portfolios. It will be a huge market going forward, with $40 billion expected in 1998 alone. And that's only a subsector of the asset-backed market." *Continued on page 30*

Robert Bynum, W'80: Food, Fun and All That Jazz

In other countries, says Robert Bynum, "the restaurant business is a more accepted profession. In this country, waiters, bartenders and people who work in the kitchen typically tend to be there because they are in-between jobs ... That makes it difficult to find people who are truly committed to the business and who want to make it a career."

That said, Bynum is clearly one of the committed. As owner of Zanzibar Blue, an elegant jazz restaurant; Warmdaddy's, a more downhome blues restaurant, and Brave New World, a "world music" dance club, Bynum is one of Philadelphia's most successful businessmen in what is generally viewed as a tough restaurant/entertainment environment. He has been credited with everything from increasing the city's appeal as a travel destination for African Americans to improving race relations by offering upscale sophisticated venues that attract both black and white professionals.



BYNUM

Bynum himself is not your stereotypical restaurateur. "I'm not a schmoozer," he says. "I try to hire people who can do that." But he does appreciate a business that "allows you to express yourself creatively. What's great is that you can see the impact of a new idea — whether it's a different type of food, beverage, entertainment or direct mail campaign — in a fairly short period of time."

What Bynum finds difficult is delegating. He and his brother Benjamin have run the business together since the establishment of Zanzibar Blue in 1990. They have 140 employees and a business plan that calls for opening another Warmdaddy's in Baltimore's Inner Harbor this spring, plus a Warmdaddy's Comfort Food take-out restaurant at the Philadelphia airport next summer (one such take-out is already up and running in Philadelphia's Bellevue Hotel). They also operate a cabaret lounge called Deluxe.

"It's difficult to maintain control and grow at the same time," says Bynum, *Continued on page 30*

Research Wire

Below is a summary of several research projects recently completed by Wharton faculty.

Why Firms Use Currency Derivatives

Although derivatives have been criticized as inappropriate speculative vehicles that can have disastrous consequences, large corporations increasingly turn to derivatives to reduce their exposures to a variety of risks in global capital markets. According to a recent study conducted by Wharton's Christopher Geczy and Catherine Schrand and Ohio State University's Bernadette Minton, on average, many of the largest companies are using derivatives in an economically rational way in order to reduce volatility in their cash flows, which, if not otherwise reduced, might inhibit their investment in valuable projects.

According to the researchers, the majority of Fortune 500 companies have potential exposure to foreign currency risk from sources such as foreign operations, foreign-denominated debt, or exports. Almost half report using currency swaps, forwards, futures, options, or combinations of these tools.

Among the researchers' findings: companies with relatively good opportunities for growth (those that have the most to lose from fluctuations in cash flows) or that are financially constrained with respect to short-term liquidity (those that already are short on cash) – or both – tend to use derivatives. In addition, firms with extensive foreign exchange-rate exposure and economies of scale in hedging activities are also more likely to use currency derivatives, and the source of foreign exchange rate exposure is an important factor in the choice among types of currency derivatives.

The researchers conclude that by hedging cash flow volatility, firms may increase the probability of having cash available for investment projects should the need arise. These results, say the authors, are consistent with the experiences of pharmaceutical companies like Merck, which report that when they do not hedge, fluctuations in cash flows resulting from foreign currency movements can have strong adverse effects on important R&D projects. Given that the evidence in the study supports models of the rational use of derivatives for hedging purposes, the authors also suggest that the largest companies in the U.S. are, on average, not engaging in wholesale speculation with derivative instruments as much as recent media coverage implies.

Christopher Geczy, Bernadette Minton & Catherine Schrand; Why Firms Use Currency Derivatives – Journal of Finance V52, 9/97, No. 4

Rating Morningstar

Look carefully at most advertisements for mutual funds and you will likely find the fund trumpeting its Morningstar ratings. According to a new study by Wharton's Marsall Blume, Morningstar's rating method is flawed and does not represent an accurate way to distinguish among the thousands of choices available in the mutual fund market. Morningstar rates investment performance of mutual funds on a scale of one to five stars, with five stars as the highest rating and one as the lowest. For the past decade, households have been net buyers of equities through mutual funds. Ratings and rankings that help potential investors distinguish among the thousands of choices available have become essential.

In analyzing Morningstar's rating methodology, Blume found that a fund with a long history is less likely to receive a five-star rating than a fund with a short history. He also found that Morningstar's system tends to favor no-load funds over load funds: Morningstar assigns its highest two ratings to nearly half of the no-load domestic diversified equity funds it evaluates while it assigns its lowest two ratings to just over a quarter of these funds.

Marshall E. Blume; An Anatomy of Morningstar Ratings

Core Competencies: Are They a Fad, or Just Misunderstood?

The term "core competence" has been praised as an outstanding idea and derided as just another management fad. Many companies that have tried to identify their core competencies have had a difficult time doing so and have had even more difficulty translating those competencies into new products, markets, or services.

In a recent report that sheds new light on the relevance and value of competencies, Wharton's Ian C. MacMillan and Columbia's Rita Gunther McGrath describe their new approach to competitive competence development: *Accelerating Competitive Effectiveness (ACE)*. The authors, following five years of data collection covering more than 1,000 projects in all major industries worldwide, have developed a new definition of competencies that combines an organization's skills, assets and systems in a way that allows the firm to achieve a performance profile that distinguishes it from its competitors. They take a fresh look at how successful teams maximize their effectiveness and identify four widely held misconceptions about the relationship between teamwork and organizational competence. They also provide tools to help executives create competence-driven competitive advantages that can be measured, monitored, and, most important, managed.

Ian C. MacMillan and Rita Gunther McGrath; Accelerating Competitive Effectiveness: Discovering the Competencies that Fuel Future Growth

Natural Disasters: Who's Going to Pay?

In the wake of numerous recent floods, earthquakes, hurricanes and other natural disasters, losses in the billions have staggered property owners, caused some insurer insolvencies and triggered large amounts of disaster assistance which have created budgetary concerns at the federal level. While some loss is inevitable, a study by Wharton's Paul Kleindorfer and Howard Kunreuther has found that the economic devastation can be lessened through risk mitigation measures (RMMs) such as bolting a house to its foundation in an earthquake-prone area or anchoring the roofing for structures located in hurricane-prone regions.

In their study, the researchers worked with three prominent natural hazard modeling firms and evaluated the impact of mitigation in several "model" cities which are subject to earthquake and hurricane damage. In the analysis of two of those model cities — Oakland (subject to earthquakes) and Miami/Dade County (subject to hurricanes) — the researchers found that mitigation is beneficial in reducing losses to both the insurers and property owners. The benefits to insurers come not only through reductions in expected claims, but also through significant decreases in worst case losses and resulting costs of financial distress.

Despite potentially large reduction in losses to property owners, the research shows that many are reluctant to invest in cost-effective risk mitigation measures. Some reasons which may explain this are an "it cannot happen to me" attitude, budget constraints and a myopic view of the future, making property owners much more sensitive to the upfront costs of mitigation than to the potential future benefits of the mitigation measure.

Kleindorfer and Kunreuther suggest three types of public-private partnership programs that can encourage mitigation: (1) well-enforced building codes, (2) insurance premium reductions linked with long-term loans for mitigation and (3) insurers offering lower deductibles for those investing in mitigation. The authors suggest that these same programs, together with adequate risk-based insurance premiums, can also help to promote innovations involving new capital market instruments to cover a substantial portion of future catastrophic losses from natural hazards.

Paul Kleindorfer and Howard Kunreuther; The Complementary Roles of Mitigation and Insurance in Managing Catastrophic Risks, a paper presented at the Public Private Partnership2000 Conference on "The Uncertainty of Managing Catastrophic Risks" in Washington, D.C. on December 11th

To Build or Not to Build: Does America Have Enough Office Space?

For years, many experts have predicted that telecommuting, downsizing and technology will reduce the demand for office space. But according to research by Peter Linneman, director of the Wharton Real Estate Center, the demand for office space in the U.S. will grow substantially over the coming decade in spite of significant real rent increases (ultimately reaching replacement cost levels) and continued managerial and technological advances. Based on his calculations that nearly 5.4 million new office sector jobs will be created over the next decade, Linneman figures that the demand for office space will conservatively grow by an annual rate of 1.25 percent in the next 10 years. This means that each year the U.S. will absorb roughly the entire office stocks of the Philadelphia and Orlando metropolitan areas combined. In the next decade, an amount equal to two New York City metropolitan areas plus one Chicago metropolitan area will be absorbed. The total increase in office demand, figures Linneman, will range from 800 million to 1.5 billion square feet over the coming decade with the bulk of this new development occurring after 1999. "The challenge facing the office real estate sector will be to bring new space on line only as it is economically justified," Linneman says.

Peter Linneman; Will We Need More Office Space?

SCHOLARSHIP *Continued from page 3*

'product' opportunity with a social message."

Before attending Wharton, Natarajan was a member of the National Service Scheme program in India and helped organize disaster relief for the Latur earthquake victims in 1993. He is also sponsoring a child under the CRY (Child Relief and You) foundation. His wife spent three years in Delhi in an organization founded by Mother Teresa that provides food to the poor. The couple has a seven-month-old daughter.

Natarajan "is a very impressive individual," says Robert Alig, WG'87, director of graduate admissions at Wharton. "What's especially wonderful about him is that he underscores much of what we look for in applicants to Wharton. He saw a problem — the lack of quality education — and went out and tried to address it. He showed both commitment and initiative."

Other recipients of the HOPE Unity Award — which honors worldwide leaders who "have sacrificed personal liberties for the sake of uniting many in peace" — include Nelson Mandela and Jimmy and Rosalynn Carter. ▼

SILICON VALLEY *Continued from page 12*

monetary. It was self-esteem, fun, adventure, stimulation. It increased the surface area of life."

Morita has cut back on his involvement at Synopsis, where he now holds the title of business strategist. But he's busy as chairman of another start-up called WorldRes, an Internet company that delivers a web-based system for hotel sales, marketing and reservations. Morita, a Presbyterian, also is applying for admission to San Francisco Theological Seminary, because he feels that success can sometimes cause technology entrepreneurs to become proud and self-absorbed and to lose sight of a much bigger picture.

"[People] are working in technologies where they're literally changing electrons or atomic structures or, in the case of biotechnology, the nature of the genetic code," says Morita. "Folks involved in that type of work oftentimes miss the mystery of God because there's a sense that we control things. It's an illusion that eventually breaks, and when people experience that, they need help in establishing their spiritual life." ▼

NETWORK NEWS *Continued from page 22*

bridges, Rosenkopf says. "They are either much more resource limited or they are playing catch-up in establishing the networks they need."

All companies say they want to be innovative, Rosenkopf notes. "They come up with ideas to accomplish that goal, ranging from employee involvement schemes, suggestion programs, entrepreneurial seed ventures and so forth. They generate lots of unique, interesting ideas that could be pursued. But ultimately they have to choose among different options. What frequently happens is they choose things that fit very closely with their established platforms. The choices they make squeeze out all the interesting variations they considered. Extensions of all the platforms and technologies are important, but firms also have to emphasize more variations away from current operating procedure."

Teamwork: Diminishing Returns

"When you have an executive team — people in positions to make strategy — that has been together too long, studies show that they get stuck in the same way of solving problems," says Rosenkopf. "That means that companies should think about bringing in a new executive, or a new team, in order to change things around. You shouldn't be waiting for people to retire or leave the organization.

Ultimately companies have to choose among different options. What frequently happens is they choose things that fit very closely with their established platforms.

"Of course some companies don't have this problem because their industry is so fast moving that it's hard to keep an executive team together. But in more stable and mature industries, executive teams tend to go on and on forever. These are the firms that get set in their ways.

"Research on group problem-solving ability shows that when you create a group, it has to learn first how to work together. Initially, its performance is poor, then goes up and then goes down again because of this staleness. The peak time together is about two years. So you can imagine how an executive team that has been together 10 or 15 years may be well past the point of peak performance. That's not to say you throw everyone, or even anyone, out. You might want to add new resources or create several new positions and change the dynamic that way. Your basic goal is to jumpstart the team." ▼ *R. W. S.*

Malleable Corporations

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the largest study ever of post-acquisition management — found that post-acquisition integration skills are one of the key factors in gaining advantage from mergers & acquisitions.

The study examined 483 acquisitions from 1968 to 1996 in the financial services industry, involving 52 companies that represent nearly half of the assets in the industry. It found that acquiring firms that had specific post-acquisition plans for integration were more likely to generate higher returns.

"Acquirers that have created and documented specific routines and carried these over to new transactions fare better than those who treat acquisitions as one-time, ad-hoc exercises," Singh says. "It is not so much how often you do it, but how well you learn from experience." He says processes need to be codified and routinized, with manuals, document procedures, consistent integration teams and other knowledge-based processes. "This has more of an impact on performance than factors such as the quality of the acquired firm or whether it is an in-market or out-of-market transaction."

There are many effective ways to design the transition process. For example:

- Banc One has created a highly sophisticated process for integration, including converting information systems and "affiliating" human resources through training and socialization. At the same time, product lines are not standardized, and the acquired management team is given a high degree of autonomy.
- Norwest uses another systematic approach, achieving much higher levels of integration by centralizing data processing and standardizing product lines.
- The process at NationsBank, in contrast, not only centralizes the information systems and product lines but also creates tight centralized management control by replacing top management of the acquired firm.

There is no one right recipe for successful post-acquisition integration. Having an effective process and learning from each acquisition seem to be the keys to improving performance.

The growing awareness of the importance of post-acquisition integration may be why banking institutions are increasingly using strategies to enhance the effectiveness and performance of the new entity.

Shifting Networks of Alliances

Similarly, the focus of alliance building has shifted from solely building single, long-term alliances to managing shifting combinations of both short- and long-term allies. Biotech firm RPR-Gencell has established a process for assembling and transforming a complex network of allies needed for new gene therapies. It has organized more than a dozen partners to solve the puzzle of new gene therapies. With only 280 researchers in its in-house division, Gencell has access to more than 2,000 researchers through alliances. It can create new partnerships and dissolve old ones. But to do so, it has had to develop a strong process for managing the network.

"The challenges in biotechnology make alliances essential," says Thierry Soursac, president of the Biotechnology Division of Rhône-Poulenc Rohrer and general manager of RPR-Gencell, who attended a Wharton conference co-sponsored by the Wharton Emerging Technologies Management Research Program and SEI Center for Advanced Studies in Management. "There are many complex possibilities for combinations of genes, and technologies are evolving at lightning speed. Even for major corporations, resources are scarce." Flexibility is also needed. "When you are opening a new way in the jungle, you don't see more than 10 feet ahead of you," he says.

The alliances are designed for flexibility. Gencell establishes milestones so allies can be moved in and out of the network. "The deal is structured so that at each point we can decide whether to continue or step out," Soursac notes. "The milestones are linked to specific achievements of technology within a certain time period. This structure creates a lot of fluidity. In this network, players are coming in and out almost every quarter."

The strengths of the flexible network approach are lower investment costs and flexibility to exit or to build a deeper relationship if the collaboration proves fruitful. "The structure gives the company great access to research," Soursac says. "We can adapt to new technology very quickly."

On the downside, there are legal and confidentiality issues, management challenges and a difficulty with developing the competitive intelligence to foresee coming advances in technology. Continuity also provides a challenge. But, in biotechnology, the benefits of not being locked into a relationship with only one partner whose gee-whiz technology turns out to be unworkable or unneeded more than balance these drawbacks.

Overall, a focus on creating the perfect structure for alliances and acquisitions has given way to a focus on establishing the right processes for managing their evolution. "There has perhaps been an overemphasis on structure," Singh says. "Companies believed that if they structured the alliance properly, it would work. The emerging view is that we need to think about a process for managing relationships. Firms more experienced in the M&A arena tend to rely less heavily on formal contracts and rely more on their relational skills."

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STARR *Continued from page 25*

Newspaper articles have noted the unusually large number of senior-level women in asset-backed bond departments, suggesting that the area was ignored by men until the 1990s when it became a hot, high-growth market. Starr is more circumspect. Asset-backed bond departments still have more men than women, she notes, although "more women are in senior positions here than you typically see in other finance areas."

Starr, who grew up in Silver Spring, Md., and went to high school in Clearwater, Fla., lives in Manhattan with her husband and two-month-old baby. She spends most of her time at work talking to institutional investors, "helping them figure out why they should be buying asset-backed bonds and where they should be putting them in their portfolios. I also help them determine where there is the most relative value as well as write research reports and develop trading strategies."

Starr's expertise in the field of asset-backed securities has landed her on *Institutional Investor* magazine's all-American research team for the past six years.

Her advice for Wharton graduates is straightforward: "Don't always look for jobs in whatever the hot area is at the moment. It's not necessarily where the most opportunities will be down the road. Instead, focus on the businesses that interest and excite you, and make your own opportunities there."

BYNUM *Continued from page 25*

who typically works 12- to 18-hour days and was recently listed in *Philadelphia* magazine as one of 20 people responsible for reviving the city's downtown. "It's about making sure people do things the way you want them to. Inevitably they don't, whether it's providing good service to the customer, buying a new phone system, devising creative ads and so forth. I'm kind of particular."

Bynum grew up in the business. His father owned several well-known nightspots, including the Cadillac Club in north Philadelphia. "My mother worked in the bar there. I would go in after school and see people who had been drinking a lot. It left me with a negative impression," says Bynum, whose favorite drink is orange juice.

After Wharton he worked and traveled for an import-export business. "When I was in Togo, I remember being amazed at how much more nightlife there was in this small African country than in Philadelphia," says Bynum. He and his brother, who went to Morehouse College and Philadelphia's Restaurant School, felt they had a shot at changing that. "It's difficult to get this city to buy into new ideas, so we had to decide whether our concepts were sellable." They were, although Brave New World, which opened in October and features reggae, Haitian and African music, among others, "will be a challenge," Bynum says. "We were a little more confident with Zanzibar Blue, because Philadelphia has a jazz background. Brave New World's world music concept is more foreign."

ALUMNI CLUBS *Continued from page 31*

C-SPAN. The Wharton Club in Washington DC recently held "Networking Gala XVI," the latest in a series of social events that brings together alumni from all local chapters of business school clubs.

The School also works with alumni clubs to sponsor annual regional alumni meetings in Asia and Europe. These programs bring together alumni, prominent government and business leaders and members of the School's faculty. The 1998 conferences will be in Taipei, Taiwan, on June 12 and 13 and in Munich, Germany, on June 25 and 26. Refer to the ad on the inside cover of the magazine for more details.

WHARTON ALUMNI CLUBS ARE ... MEETING WITH WORLD-CLASS FACULTY

Wharton alumni have unique access to some of the School's most celebrated professors as they visit alumni clubs around the world. Faculty not only share their insights into critical business issues of the day, but also inform alumni about issues of strategic importance to the School. In September, Finance Professor Jeremy Siegel, rated by *Business Week* as the #1 business school professor in the country, spoke to groups in Seattle and San Francisco about trends in the stock market. Associate Professor of Management Harbir Singh met with alumni in Brussels to discuss "Global Leadership and Strategy." Paul Morin, director of Wharton's Small Business Development Center, dispensed hands-on advice while moderating a panel of local entrepreneurs in Boston. Alumni in Thailand met with Michael Useem, William and Jacalyn Egan Professor of Management, when he addressed a "Leadership for the Future" conference in Bangkok at the Sasin Graduate School.

WHARTON ALUMNI CLUBS ARE ... INTERACTING WITH FUTURE ALUMNI

Wharton Clubs are ensuring the perpetuation of a strong network by involving current students — the School's "future alumni" — in local events before graduation. The Wharton Club of Atlanta annually hosts members of the on-campus Wharton South Club for a weekend-long series of social events and discussions with prominent alumni in the area. The Northern California Club has partnered with the Wharton Technology Club to produce a winter break reception designed to introduce students to alumni currently working in Silicon Valley. All alumni clubs participate in the annual Club Day on-campus, which gives students information about the benefits of club membership and allows them to sign up with their local chapter.

Wharton Alumni Clubs:
Making a Global Impact

The Alumni Club Network helps keep the Wharton experience alive long after graduation. As alumni get more and more involved with School activities, the range of programs and services offered by these clubs is constantly expanding.

Below are just a few examples of the creativity — and practicality — that alumni bring to the task of organizing club events. Underlying the energy and enthusiasm illustrated by these examples is an important caveat: the Wharton Alumni Network will be vibrant and relevant only to the degree that graduates participate. If you are not already involved, contact your local club and help build the world's strongest business school alumni network.

Wharton Alumni Clubs Are ... Creating Electronic Networks

Two alumni clubs have gone online with their own web sites to keep members as up-to-date as possible with information about club events, job opportunities, member lists, School news and so forth. The two clubs are: New York (http://www.wharton-alumni-nyc.org) and Atlanta (http://www.mindspring.com/~whartonatlanta/home.htm). Over the next several months, plans are in the works for at least another half-dozen clubs to join these Wharton web pioneers.

Other clubs create distribution lists to send email reminders to their members about upcoming programs as well as keep alumni in touch with one another. The newly-established Wharton Club of the Carolinas has strengthened its fledgling organization through online surveys of the alumni marketplace and advertising of upcoming events. The Wharton Club of San Diego was the first "paperless" club when it implemented an all-electronic system of fax and email communication with members.

The School is partnering with the clubs in facilitating these communications. A list of club presidents and a schedule of events around the world are found at the Alumni Affairs homepage located on the School's web site (http://www.wharton.upenn.edu/alumni/index.html). Check out the information about events in cities to which you are travelling on the chance that you could participate in a local club program. In addition, the "Wharton Virtual Alumni Community" is being developed to keep alums linked to one another and to the School. Be on the lookout for more details in a future edition of the magazine.

Wharton Alumni Clubs Are ... Developing Career Management Programming

Career management assistance is sought by more alumni than any other service provided by the School. Our Career Development and Placement Office (CD&P) and the Office of Career Planning and Placement Services (CPPS) have a number of programs in this area, while CD&P and CPPS staff frequently go on the road to meet and discuss career options with individual alumni. CD&P staff recently met with alumni club members in Madrid, Frankfurt, Chicago, New York and Philadelphia to describe alumni services.

These programs are complemented by work some clubs are doing to help alumni in all stages of their career development. Witness the activities of The Philadelphia Club, where a team of club members meets monthly to set up skills development programs, an annual day-long career management seminar, networking events and a Career Management Resources Guide. The New York Club is about to put job opportunities on a password-protected site on its newly established web page. The Wharton Club of Washington DC publishes an annual edition of the *Career Guide*, which includes a directory of club members, articles on hot industries, interviewing tips, on-line resources and more.

Wharton Alumni Clubs Are ... Networking with Business Leaders in Their Communities

Wharton clubs build alliances between alumni and other business leaders in their communities. They invite prominent local business and civic leaders to address club meetings and often invite members of other professional organizations or business school alumni clubs to participate in their events.

For the members of the Wharton Club of Colorado, the Denver Business Series has brought together alumni from ten of the nation's top business schools on a quarterly basis to facilitate business and social interaction. The Wharton Club of London participated with alumni from several European and American business schools in the program "Masters in Business Leadership," an all-day seminar that challenged participants to recognize international opportunities, foster a vision, and lead and energize a team of people. Former ambassador Robert Strauss recently met with the Wharton Club of Dallas in an event that not only drew people from all over that city, but was also carried around the country on

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