

**NEWS** z-squared? Or does all the energy consumed need to be green energy? If all energy consumed has to be green, how is this guaranteed? Is buying “green power” from the utility company enough? This may mean only that it purchases enough green energy to cover users’ needs but that it doesn’t send that actual energy to them. Or would it be better to buy carbon credits to offset any electricity imported from the grid, based on the utility’s average greenhouse-gas emissions per kilowatt generated? Paul A. Torcellini, a senior engineer with the

National Renewable Energy Laboratory in Golden, Colo., notes that in real life some of the electricity you buy is bound to have been generated at the cost of greenhouse-gas emissions.

Torcellini points out that the building stock in the United States is growing faster than builders are deploying energy-efficiency technology. As a result, with buildings accounting for just about 18 percent of the country’s energy consumption, the absolute amount of energy used is increasing one-and-a-half percent per year. So “we either need to save more

or build more power plants,” he says.

Kaneda is already developing another z-squared structure, this one for the La Jolla, Calif., research building of the J. Craig Venter Institute, a biotech firm based in Rockville, Md., that is seeking to create artificial life and use genomics to solve a wide array of pressing global problems. With the name of the famed genome pioneer, J. Craig Venter, over the door, that building will get a lot of notice, even if the former San Jose bank remains known only to tech insiders.

—TEKLA S. PERRY



**BIG DEALS IN BANGALORE:** Venture capitalist Promod Haque [right] listens as Claudia Fan Munce, IBM Venture Capital Group managing director, strategizes with IBM India’s chief scientist, C. Mohan.

Tohmatu and the National Venture Capital Association, India stood with Canada, China, and Israel as the country most favored by VC investors. Respondents wrote that India is particularly attractive due to “its emerging entrepreneurial environment” and R&D and engineering opportunities.

India’s traditional strengths, notably inexpensive and available talent, are now backed up by a growing domestic market and the emergence of start-ups with transnational business models, says Haque. Add to that an increasing penetration of mobile phones and broadband Internet connections, and India looks very attractive.

Traditional VC outfits work by pooling money from wealthy individuals and institutional investors such as pension funds and foundations, and investing the money in start-ups. VCs typically play an active role in the management of the firms they invest in. Any return on investment—usually from the start-up being acquired or going public—doesn’t come for five to seven years on average.

Corporate VCs get their funds from the parent company itself. Firms like Intel, which are subject to investor pressure to profit in the short term, use their VC divisions to make longer-term investments. “Corporate venture arms can leverage the strategic and operating resources

## Indian Start-ups Lure Silicon Valley Cash

**Tech giants invest in Bollywood, e-government, and more**

Having discovered India’s inexpensive engineering talent years ago, nearly every big tech company has a subsidiary there. Now the venture capital (VC) groups of these multinationals are discovering India’s independent start-ups. Venture capital investment in India is on the way to a substantial increase this year, with US \$341 million committed in the first half of 2007. That follows VC’s nearly doubling in 2006 to \$508 million spread over 90 deals. Nearly 15 percent of the 2006 money came from

the venture capital divisions of companies like Cisco Systems, Google, IBM, Intel, and Yahoo, according to Arun Natarajan, CEO of Venture Intelligence, a Chennai-based firm that tracks VC investments. That’s a much higher proportion than in the United States, where in 2006 big companies accounted for less than 8 percent of VC financing.

The amount of VC funds coming into India from big corporations is increasing on top of a general growth in foreign VC investment, he says. The research services

company, Evalueserve, in Gurgaon, India, says that 40 VC firms are planning to invest \$4.4 billion in India in the next four to five years.

“We will continue to see more money flowing into India,” says Promod Haque, managing partner of Norwest Venture Partners (NVP), a Palo Alto, Calif.-based VC firm that has coinvested with Cisco, IBM, and Intel. “This is definitely part of a global trend, but India offers some unique opportunities.” In a survey of U.S. venture capitalists released in July by Deloitte Touche

of their parent corporations,” says NVP’s Haque. “And they often fund companies that are related to their own strategic competencies,” making India’s booming technology sector a natural fit.

**INTEL CAPITAL** leads the pack of corporate investors. It began strategic investments in India in 1998 but announced a \$250 million India Technology Fund in late 2005 to focus on technology start-ups. Soon after that, it set up smaller funds for China (\$200 million), the Middle East and Turkey (\$50 million), and Brazil (\$50 million). Intel Capital has invested in 10 start-ups since it began India Fund.

“We invest in companies that complement Intel’s technology initiatives and accelerate the computing and telecom infrastructure build-out in India,” says Sudheer Kuppam, Intel Capital managing director for Australasia, India, Japan, and Southeast Asia. More infrastructure in India means a bigger market for Intel’s products.

The impact of corporate VCs is potentially bigger than what traditional VC firms can deliver. “When companies like Intel come on board as venture capi-

talists, there’s a huge boost to the credibility of the start-up, as these VCs have a very high diligence process. They evaluate a start-up much more stringently than a traditional VC firm,” says Sriram Raghavan, president of Comat Technologies, in Bangalore. Earlier this year, Intel invested about \$4 million in Comat, which is developing e-government software. Once a firm gets money from the VC division of a big company like Intel, adds Raghavan, it can draw on the company’s expertise to fine-tune its technology strategy.

**IBM**, is a latecomer to India, though the company has relationships with more than 1300 VC-backed projects worldwide. “We are just getting started here; the VC ecosystem in India is in start-up mode,” says Drew Clark, director of strategy at IBM VC Group in Menlo Park, Calif. IBM has invested in three Indian companies so far and is evaluating more than a dozen proposals. It is scouting for opportunities, both in the country’s proven outsourcing area and in companies serving India’s growing domestic travel, retail, and health-care markets.

IBM’s VC business model is unique. It does not make direct financial investments but forges partnerships with start-ups and offers its customer base, experience, and above all, market standing to expand a company’s businesses. IBM, says Clark, uses start-ups to drive innovation around open-source software, where IBM is staking out a leadership position.

In India, IBM’s partnership with NVP’s portfolio companies Virtela Communications and Persistent Systems is paying off. Virtela and IBM have jointly sold networking services to hundreds of customers worldwide. Meanwhile, Persistent, which provides outsourced software product development, has helped IBM serve its customers better. “When our customer requires a customized product such as a database or management services, Persistent, with its on-demand skills, helps us do that,” says Clark.

**CISCO SYSTEMS** exemplifies a different approach. “Typically, Cisco uses investments to learn about new markets and participate in market transitions that add

more value to the network,” says Sameet Mehta, director of India Investments and Acquisitions at Cisco. For now, that has meant investing in the entertainment industry, which according to a Confederation of Indian Industry–KPMG report is growing 20 percent annually and will reach \$13.5 billion by 2010.

With an eye on putting content and digital media over an IP network, Cisco recently invested in Nimbus Communications, a Mumbai-based TV production company. Cisco hopes that one day Nimbus might stream video worldwide. “India is one of the largest producers of movies in the world and has over 300 TV channels. While there is a vast repertoire of content, there is very little in terms of legacy distribution,” says Mehta, who thinks India could move quickly toward direct distribution of content.

Having invested more than \$70 million in less than two years, Cisco plans to put another \$25 million to \$30 million into India over the next few months. Some of these investments are likely to become full acquisitions by Cisco later on, says Alok Shende, vice president of IT practice at research firm Frost & Sullivan, in Mumbai.

Most of the corporate VCs are investing in middle or late-stage start-ups, and little money has trickled down to early-stage start-ups. Google intends to fill the gap by investing in three Indian early-stage venture capital funds and by supporting a group of Indian entrepreneurs and investors called Band of Angels.

Other technology companies such as Nokia, Philips, and Siemens have VC divisions interested in India as well. Siemens Venture Capital, which started operations in June 2006, is now looking to invest in one or two companies in India every year.

—SEEMA SINGH

## Tech Titans and Their Indian Interests

CORPORATE VCS	RECENT DIRECT INVESTMENTS	AREAS OF INTEREST
Cisco Systems	Bharti Telesoft, Indiagames, Nimbus Communications	Online gaming, mobility, broadband content, digital media, technology infrastructure, advanced communications technology
Google	Band of Angels, Erasmic Investment Ventures, Seedfund, VentureEast TeNet Fund	Internet and mobile services, other technologies allied to Google’s mission
IBM VC Group	InstaCall, Persistent Systems, Virtela Communications	IT and communications services; software; technologies for health care, retail, and travel
Intel Capital	40 companies since 1998; 10 since India Fund was formed in 2005, including Comat Technologies, Ilantus Technologies, Insilica, Maya Entertainment, Vignani Technologies	Digital media; hardware; software services for business, home, mobility, health, Internet; semiconductor manufacturing
Yahoo	BharatMatrimony.com	Content-based services