Tech Museum Awards honor low-tech solutions to big problems

By John Boudreau
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Change-the-world technology — the flashy and expensive kind — is the lifeblood of Silicon Valley.

But every year, many of the region's leaders pause to spotlight a different type of innovation — the low-tech kind. This year those include technologies that help build earthquake-resistant homes in rural China, improve education in the slums of Mumbai and guarantee clean needles at hospitals in Ho Chi Minh City.

The eighth annual Tech Museum Awards, held Wednesday night at the San Jose McEnery Convention Center, honored 25 "tech laureates" out of more than 650 nominees from nearly 70 nations. Five won cash prizes of $50,000. But all 25 of the nonprofit and for-profit social entrepreneurs were given four packed days of workshops and networking with potential partners and funders.

A special recognition went to Nobel winner Muhammad Yunus, a pioneer of "microcredit." The founder of the Grameen Bank received the James C. Morgan Global Humanitarian Award.

"Standing here this evening in the Silicon Valley is important because Silicon Valley symbolizes something in the world," Yunus said in his acceptance speech before about 1,500 people at the black-tie event. "It's a great honor to receive an award coming from all of you who are changing the world."


Mark Walker, managing director of global community affairs for Applied Materials, the chief sponsor of the event, said there is a natural bond between Silicon Valley and the far-flung innovators honored at the annual awards.

"Why are we interested in this stuff? There is always someone who can build another mousetrap. That's the culture of Silicon Valley. And these people are doing the same thing," he said.

Still, there are differences. the Tech Museum Award winners aren't looking to win over the wallets of Best Buy buyers or Fortune 500 companies. These organizations aim to provide a decent life to those lacking the most basic opportunities.

Hari Sharan employs 19th-century biomass gasification technology to bring electricity to rural Indian villages. His company, DESI Power, converts vegetation — such as rice hulls and corn husks — into energy. Not only does that provide power to poor communities, it also creates opportunities for micro-enterprises that keep residents from migrating to the slums of big cities.

"Essentially, what we are doing is increasing the GDP of the village," said Sharan, whose headquarters is in Bangalore, India's technology capital. With access to power, new businesses are created, such as rice mills.

"We are changing societies," Sharan said.

Randolph Wang, who studied computer science at the University of California-Berkeley, abandoned teaching at Princeton University to launch Digital StudyHall in India.
"It's a very simple idea. You can call it Netflix for poor children," said Wang, who already had his elevator pitch down.

His nonprofit, which is associated with the University of Washington, provides video classroom lessons from top-notch teachers to poor schools, which usually are no more than dirt-floor rooms supervised by young teachers with little training.

"We have seen dramatic student performance improvements, from 100 percent to 300 percent," he said.

The Full Belly Project, a North Carolina-based organization, has created a nut-shelling device that can elevate subsistence farming into profitable businesses for poor farmers.

Star Syringe, a U.K.-based company, makes non reusable syringe technology for the developing world, where diseases are often spread through multiple uses of needles in hospitals.

According to the World Health Organization, half of the 16 billion injections given each year around the world are unsafe. "This results in 22 million new cases of hepatitis B, 9 million cases of hepatitis C and a quarter-million cases of HIV every year," said Robin Bullock, director of Star Syringe.

The genesis of the awards ceremony was the 1990s United Nations study, "The State of the Future at the Millennium," which focused on the importance of assisting the developing world and 15 challenges facing the planet. The Tech Museum has since highlighted the work of 200 global entrepreneurs, academics and nonprofit workers using technology and innovative business plans to improve the lives of millions.

In addition to Applied Materials, the project draws support from Intel, Microsoft and Accenture, as well as the Fogarty Institute for Innovation Health and the Swanson Foundation, founded by Genentech co-founder Robert Swanson.

The Tech Awards are designed to be more than a congratulatory slap on the back.

"It's the whole networking — learning from each other, exchanging ideas about micro-technology, and finance," Sharan said. "We hope to get financing."

And though the work of these social entrepreneurs is a world away from that of the valley, they nonetheless feel they are among kindred spirits.

Bullock said he has been struck by "the warmth that has been bestowed upon us. And everyone here is interested in what we are doing."

Staff writer Mike Cassidy contributed to this report. Contact John Boudreau at jboudreau@mercurynews.com or 408 278 3496.

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**Winners of the 2008 Tech Awards**

**Intel Environmental Award:**
Biomass Energy Project, created by the Namibia-based Cheetah Conservation Fund’s Bush Project, is a biomass processing plant. It converts brush into a clean and economical alternative to firewood, coal and charcoal for cooking. [www.cheetah.org](http://www.cheetah.org)

**Accenture Economic Development Award:**
DESI Power, based in Bangalore, India, uses biomass gasification of agricultural waste to expand the supply of electric power in more than 100 Indian villages. [www.desipower.com](http://www.desipower.com)

**Microsoft Education Award:**
Digital StudyHall, based in Lucknow, India, records classroom lessons given by high-quality teachers and distributes the videos to disadvantaged schools in rural areas and urban slums. [http://dsh.cs.washington.edu](http://dsh.cs.washington.edu)

**Katherine M. Swanson Equality Award:**
Build Change, headquartered in Chengdu, China, designs and trains builders and homeowners to build earthquake-resistant houses in developing countries using locally available skills and materials. [www.buildchange.org](http://www.buildchange.org)

**Fogarty Institute for Innovation Health Award:**
Marc Koska’s Star Syringe, based in the United Kingdom, has created the K1 “auto-disable” syringe. It has a locking ring in the syringe barrel so that once the plunger is fully depressed, it locks in place and can’t be used again. The single-use syringes reduce of cases of hepatitis B and C and HIV. [www.starsyringe.com](http://www.starsyringe.com)

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