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## 'Simputer' aimed at easing life in Indian villages

By Mike Langberg  
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I've always been a digital-divide cynic, suspecting all the talk about transforming the lives of poor people through Internet access to be self-serving narcissism from Silicon Valley technologists seeking a justification for making themselves rich.

Vinay L. Deshpande has changed my mind.

Deshpande, a Stanford-educated software entrepreneur in Bangalore, India, is the driving force behind the Simputer, a handheld device that resembles a Palm personal digital assistant.

The Simputer ([www.simputer.org](http://www.simputer.org)), which costs from \$175 to \$375 depending on features, is designed for impoverished rural villages in India and other under-developed parts of the world. This isn't a cure for hunger or disease, but Deshpande makes a convincing argument for how the Simputer could make life better for people living far from the technology fast lane.

If you're struggling to feed your family on an income equal to a few dollars a day, you don't need access to Amazon.com or eBay. What you do need are the latest commodity prices for your crops if you're a farmer, or accurate weather reports if you fish from a small boat, or a reliable way to gather medical data if you're a rural health worker.

These are things the sturdy Simputer can do at a far lower cost than temperamental and fragile laptop computers.

Deshpande, who spoke Wednesday at the LinuxWorld trade show in San Francisco, got the idea for the Simputer at a family wedding near Mumbai in November 1998, where he met the owner of a small community bank.

The banker had a problem: He operates what is called a "pygmy deposit scheme," where independent agents travel to isolated villages to collect deposits and make payments as small as one rupee, or about two cents. The agents give paper receipts, and sometimes cheat the bank by turning in altered copies of the deposit slips listing smaller amounts. Catching such cheaters often takes days or weeks.

The banker wanted a handheld device costing no more than \$200 with an attached receipt printer that agents could use to collect deposit data, downloading the information by phone to the bank's computers at the end of the day. This device wouldn't eliminate theft by the agents, but they'd have a hard time disappearing with more than one day's worth of funds.

Deshpande, 55, assembled a team of academics from the Indian Institute of Science and engineers from his company, Encore Software ([www.ncoretech.com](http://www.ncoretech.com)), both based in Bangalore. The group quickly realized any device created for the banker could solve many other problems in many countries.

The Simputer is designed to be easy to operate, reliable, rugged and to run on easily obtained AA batteries. There's a slot for sliding in smart cards, which cost less than \$1 and can be given to every person in a village for storing their personal information. A built-in modem makes it possible to collect

person in a village for storing their personal information. A built-in modem makes it possible to collect information and send out messages through the Internet. Villages behind the reach of phone lines can send and receive data through the smart cards.

To hold down costs, the Simputer runs a slimmed-down version of the free Linux operating system -- eliminating royalty payments that would be required for the Palm or Microsoft PocketPC operating systems used in today's PDAs.

Deshpande and his colleagues also developed visual icons and text-to-speech feedback so that even illiterate users could benefit from the Simputer.

Encore Software began producing the first run of Simputers this month at a contract manufacturing plant in Bangalore; another production line is due to start up next month in Singapore. The Simputer isn't available yet in the United States, but Deshpande is talking with several potential distributors and expects to have a deal in place by year-end.

Meanwhile, the Simputer Trust is willing to license its hardware and software designs to any interested manufacturer for a one-time fee of \$25,000 to companies in the developing world and \$250,000 to companies in the developed world.

As word of the Simputer has spread, Deshpande is hearing more ideas for how his creation could be used.

The post office in India, for example, is considering giving the Simputer to mail carriers who handle money orders. A villager could send money through a smart card, plugged into the mail carrier's Simputer, for delivery to a relative on the other side of the country, downloaded to the recipient's smart card. This would eliminate sending money orders through the mail, where they are often lost or stolen.

Health-care agencies in South Africa want to develop a small ultrasound monitor that could be plugged into the Simputer for tracking fetal development among pregnant women in rural settlements.

The Indian government is also interested in the Simputer for collecting reliable and timely information on agricultural production, a process now bogged down by inaccurate and slowly gathered paper documents.

Asked to summarize his hopes for the Simputer, Deshpande spins around and points to logo printed on the back of his official Simputer Trust T-shirt: "Radical simplicity for universal access."

There's no guarantee, of course, the Simputer will succeed. Even if it does, technology alone can't fix all the problems causing poverty.

But I found Deshpande to be uplifting. The technology revolution, in the end, really could help everyone on earth make better lives for themselves.

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