

Putting Technology to Work for Development
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I'm delighted to have the opportunity to speak to you, here, on a topic I am passionate about: the effective application of technology to the needs of all people. My background is as a Silicon Valley engineer and entrepreneur, and I've co-founded two successful optical character recognition companies – technology that allows computers to read printed documents. In the mid-80's we built a prototype reading machine for the blind, where the machine would scan the page and read it aloud to the blind person with a synthetic voice. However, I couldn't convince my company to produce this product: The market size was under \$1M a year and our venture capital investors had put more than \$25M of investment into my company – we couldn't afford to go after such a tiny opportunity.

And that's the problem. There's a huge gap between what's possible and what's profitable, between breaking even and delivering 50% annual return on investment. Many technologists would love to work on socially important problems, but we have failed to give them models.

I am going to give two models for bridging the gap between possibility and profitability. The first is social enterprise, a technology venture operated as a business but inside a nonprofit form, with two bottom lines: social and financial. The goal is not to make lots of money, but instead deliver the maximum good while operating sustainably: generally at breakeven. By operating the effort as an enterprise, the technology user is a customer – not the recipient of charity. This provides market feedback and empowers the users. My first social enterprise project of my nonprofit, Benetech, became the world's leading maker of reading machines for the blind - \$5M a year in revenues and operating just above break-even.

Technology is very cheap to replicate once created – that's why companies like Microsoft are immensely profitable. In the social context, it means that it's easy to replicate the technology worldwide and even cross-subsidize: charge people and organizations a price that's accessible to them.

The second model is open source free software and more open intellectual property. Right now, many NGO's and people around the world are using pirated software – and companies like Microsoft are making this harder both technically and legally. Over the next few years, we need to make sure that people have real choices: either to pay for commercial software or have access to free or nearly free software. And open source means that each country can have access to the building blocks of technology – slowing or even reversing the flow of hard currency from poor countries to rich countries.

In general, we need to keep the social contract between IP creators and society: IP protections are there to encourage inventors, authors and companies to create social value. Many of the same arguments we've heard about AIDS drugs pricing and patents are going to come up again in other areas of technology.

The great news is that the barriers to technology use are ever decreasing. In a few years, a used cell phone will have the processing power of a relevant model PC and cost \$10 or \$20. There will be so much good we can do with inexpensive platforms and software to go with them. They could read for those who can't read, speak for those who can't speak, hear for those who can't hear – and remember for those who can't remember.

There are many exciting opportunities!

I can imagine today putting a 20,000 volume library in a rural village for less than \$500. A game machine, a television and an inexpensive stack of CDs or DVDs with electronic books on them – books that can talk to those who can't see or can't read – and put access to critical information within reach. We've already launched a project here in the U.S. called Bookshare.org, where more than 10,000 books are available for download over the Internet for people with disabilities in the U.S., and we plan to expand from this base.

Technology is an immensely powerful tool – and the military and commercial applications get done first. But, the social applications in education, development, justice and health are tremendous. For example, in Sri Lanka and soon in California and Eastern Europe we are testing new open source and free software designed for human rights groups – to give them an equalizing IT tool for reporting on human rights violations. We built it for less than \$1M – peanuts by Silicon Valley standards – but returning tremendous value to society.

I encourage all of us to work towards ensuring that technology fully serves all of humanity.

Thank you!