



## **IT a culprit, savior in climate change**

By: Stephen Lawson

IDG News Service (17 Oct 2007)

Climate change is both a large-scale crisis and a huge opportunity, and IT has a role in both, industry executives said at a panel discussion Thursday.

In hopes of fending off environmental disaster from rising temperatures and ocean levels, technologists need to come up with more efficient technologies and renewable energy sources, panelists said at the annual TechNet Innovation Summit at UC Berkeley. Innovation in this area is "the biggest economic opportunity in our lifetime," said John Doerr, a longtime venture capitalist and a partner in the Silicon Valley firm of Kleiner Perkins Caufield & Byers.

The benefits have already started flowing to Sun Microsystems Inc., according to Jonathan Schwartz, the company's president and CEO. Sun bet five years ago that power would become the dominant issue in the server business, and its first system that was slower but designed for power efficiency shipped about 18 months ago, he said. Those types of servers have become a billion-dollar business, the fastest-growing at Sun, Schwartz said.

He called on the IT industry to adopt a standard, like the Energy Star label for household appliances, to show the efficiency of hardware. "Just forcing everybody to become more transparent will drive a lot of change," he said. The industry will play a critical role because of the power consumption it creates, according to Schwartz. Between three per cent and four per cent of all electricity consumed worldwide goes to running data centres, he said, and that is likely to grow as emerging nations such as China and India become more connected with the Internet and the rest of the world.

Cutting back on power consumption and carbon emissions requires measurement first, Schwartz said.

The university is applying IT to that problem itself, through the Center for Information Technology Research in the Interest of Society, according to Paul Wright, a professor at Berkeley and chief scientist at CITRIS, who kicked off the event. CITRIS is doing research on a network of small, inexpensive sensors to monitor conditions in buildings. Such a network throughout California could save 5 million metric tons of carbon emissions and US\$8 billion in energy costs every year, according to CITRIS.

Panelist John Melo, CEO of Amyris Biotechnologies Inc., in nearby Emeryville, California, had the flashiest emerging solution to the energy crisis. His company has modified bacteria so they can convert crops such as corn or sugar cane into substances that are like jet fuel, gasoline or diesel fuel, Melo said. Anything that uses those products today could run on the fuels, he said. If they were made from cane, the biofuels would have 90 percent to 100 percent lower carbon emissions than fossil fuels, he said.

Google Inc. is working to solve the carbon emissions problem by cutting the power consumption in its data centre to half the industry standard, helping its employees adopt technologies such as plug-in hybrid cars and home solar energy, advocating for renewable-energy laws and providing information through resources such as Google Earth, said Larry Brilliant, [cq] executive director of Google.org, the company's philanthropic wing. But people will have to feel the need in their guts to get enough force behind change, he said.

"You don't have a million people on the Mall in Washington. This is not a movement," Brilliant said. "Writing articles and being on the Internet are not a movement."

Copyright © 2007  
ITworldcanada.com