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News for Your Neurons

Your Mom's Facebook Status: I'm Crunching Climate Data!

By Erica Gies ✉ August 5, 2009 | 5:07 pm | Categories: [Miscellaneous](#)

Solving the climate change problem or curing cancer can seem like Everest-scale problems that anyone who isn't a millionaire philanthropist or brilliant scientist can do nothing about. But now you, and all your Facebook friends, can pitch in.

Intel has created an application for the popular social networking site that allows people to donate their computers' spare processing power to scientific research.

"The more computers we have, the better calculations we can do," said biochemist David Baker of the University of Washington, who uses volunteer computing for his research via

Rosetta@home, which is working on cures for cancer and myriad other diseases. "There is no upper limit."

Volunteer computing for science has been around since 1999 when SETI put lay people to work searching for ET, but the strategy had limited reach.

Since then developers have created a general version of the SETI@home software, called BOINC (Berkeley open infrastructure for network computing), as a tool for any type of scientific computing.

The biggest remaining hurdle is that people don't know about volunteer computing. Worldwide, there are about 50 BOINC projects that engage only about 317,000 volunteers.

But now the same strategy can tap into massive preexisting social networks and marshal far more computing power.

This could be a major help for scientists who are limited by the processing power available to them. For University researchers and other scientists who don't work at a national lab with a petaflop supercomputer, this can be quite limiting indeed.

"We saw Facebook as a great way to bring large numbers to volunteer computing," said John Cooney, online programs manager for Intel.

Facebook users can choose from three projects: Rosetta@home; Climateprediction.net, which is predicting the Earth's climate and testing the accuracy of climate models; and Africa@home, which is studying simulation models of malaria transmission and the potential impact of new anti-malarial drugs and vaccines.

"To me, the interesting thing is how this gives people a way to practically and constructively engage in major issues of the day," said Matt Blumberg, executive director of the nonprofit Grid Republic, which developed the application, called Progress Through Processors, with Intel. "It's better to be part of solution than to be sitting on the sidelines and throwing up your hands."

To address potential security concerns, BOINC creates a folder on volunteers' computers that has no access to the rest of the file system. Data is transferred using state-of-the-art cryptography. And the program takes a backseat to volunteers' demands on their processors.

"No third-party site ever contacts your computer," said Blumberg. "It's only your computer that reaches out. In terms of security risk, it's comparable to browsing the web or reading email."

To keep scientists feeling secure as well, the software duplicates processing to make sure volunteers don't alter data. Even if volunteers do glimpse research topics, the risk to the projects is minimal.

"In the case of Rosetta@home, which has about 150,000 people participating, each person only gets 1/150,000 of the problem," Blumberg said.

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Posted by: pdonovan | 08/5/09 | 9:39 pm

Eventually perhaps people might realize that processor time just won't take the excess carbon out of the atmosphere . . .

Posted by: QuestionAuthority | 08/6/09 | 8:32 am

So how is this news? I've been using BOINC for years. Almost everything has a connection to social media these days - is it really news that BOINC has joined the mob of applications linking to Facebook?

Posted by: bobtheredhead | 08/6/09 | 8:53 am

This was news for me. I had heard about seti before but I am not much of a "close encounters" believer but doing research for physics or math or genetics sounds awesome to me. My only qualm with the whole thing is the fact that the program was not the easiest to use. I mean I had no trouble with it but I find it hard to suggest to my less then computer literate family members. Overall though this is a great program!!! thanks for pointing it out!!