

Tackling humanitarian challenges with citizen cyberscience

Francois Grey
CERN, Switzerland
francois.grey@cern.ch

The [SETI@home](#) project has encouraged millions of people to donate spare time on their computers for a scientific cause. Today there are dozens of projects, in fields as diverse as climatology, molecular biology and particle physics, that benefit from such volunteer computing. But this is just the tip of the iceberg.

A new generation of projects turns the volunteers into citizen scientists, inviting them to analyze scientific data online: cataloguing galaxies, scouring microscope images, or digitizing hand-written scientific notes. This trend can be called volunteer thinking.

Both volunteer computing and volunteer thinking projects involve a strong social element, and can be viewed as web-based social networking with a scientific purpose, or “citizen cyberscience”.

In this talk, I will discuss the implications of citizen cyberscience for tackling humanitarian challenges. I will use examples from Africa@home, a partnership launched by CERN, the Swiss Tropical Institute, the World Health Organization and the University of Geneva, as well as two NGOs. One example is a volunteer computing application for malaria epidemiology, called MalariaControl.net. The other is a volunteer thinking application for mapping remote regions of Africa, called AfricaMap.