# Distance Volunteer Selection and Management:

## Scientific Development Projects in Africa benefiting from Volunteer Effort

**Arnova 2007 Conference, Atlanta, USA**

### Problem

Cybervolunteerism: How to manage volunteers on a distance basis?

### Introduction

Information and communication technologies have profoundly changed the way we deal with and share information and knowledge. For the volunteer sector, the change of technology use is not just a change of communication means, but also the way how the sector can involve volunteers, not just on our doorstep but across the world. Africa@home is an example of how technology can be used by volunteers.

### Context

*Volunteer computing* takes advantage of the fact that most privately owned computers are idle most of the time and uses this time to solve scientific problems that need a lot of computing power. A volunteer downloads software, in this particular case **BOINC** (Berkeley Open Infrastructure for Network Computing). Developed by the University of California at Berkeley, the software provides a framework for distributing compute-intensive applications across multiple processors. It does this by breaking up the data into discrete chunks, which it then makes available for download from a BOINC server. Volunteers can register for BOINC projects they find interesting, and thereby offer idle CPU cycles on their computer(s) to run BOINC applications. Once a volunteer has registered with a BOINC project and installed the BOINC client software on his (or her) computer, the client communicates with the BOINC project's server and requests a "work unit" that it will download and execute. When the work unit has been treated results are sent to the server and it requests another work unit. All this happens essentially in the background of the volunteer's computer, although the BOINC client can display diverse status information.

The goal of our project Africa@home is to involve African students and universities (as volunteers) in the development and management of these *volunteer computing* projects. These volunteers gain hands-on experience with these technologies so they can harness the power of volunteer computing worldwide for their own research and/or to support research of their colleagues in universities and research laboratories across Africa. **Africa@home** provides a huge potential for *volunteer computing* to help solve the present health and environmental problems facing Africa and also bridge the digital divide by putting African researchers at the center of international humanitarian projects.

Volunteers are involved at different levels and in three main different ways:

1) **online volunteering** by **offering hardware** to run BOINC applications

2) **online volunteering** by **following technical projects** on a distance basis

3) **onsite volunteering** by **working with researchers and other volunteers** on applications, among other things by participating in training workshop, such as the one organized by the Africa@home team, and the volunteer aspect managed by ICVolunteers for events in Muizenberg (South Africa), Geneva (Switzerland) and Bamako (Mali)

In cases like this one, ICVolunteers is faced with new ways of selecting and managing volunteers on a long distance basis. The following are some of the specific issues we need to deal with:

1) **Selection of volunteers –** means and tools used to identify skills make sure the right person can be assigned to the right job, through a questionnaire and interview process

2) **Training of volunteers –** online tools and management systems, what are the tools that can help with online management for training and resources for reference?

3) **Online management and documentation –** follow up mechanisms to make sure the volunteer get the necessary information and attention in the longer run

4) **Volunteer recognition –** volunteers do not get paid money, but it would be wrong to think that they come free. Indeed, motivation is a key factor for successful volunteer activities. A culture of recognition requires appropriate measures and tools to really understand where a volunteer is coming from.

## *Actors*

Africa@home is a multi-stakeholder partnership using the BOINC technology. It involves CERN, the University of Geneva, ICVolunteers, the World Health Organization, AIMS, several other African academic institutions, the Swiss Tropical Institute, and *Informaticiens sans frontières* (ISF), with the support of the Geneva International Academic Network (GIAN) and the involvement of several African Universities and Agence Universitaire de la Francophonie (AUF).

## *Solution Parameters (Boundaries within which Issues can be addressed)*

It is not always possible to meet candidates face to face.

## *About ICVolunteers:*

ICVolunteers (www.icvolunteers.org), is an international non-profit organization specialized in the field of communications, in particular languages, conference support and cybervolunteerism (www.cybervolunteers.info). Development, exchange of information and service to the society at large are the key elements shared by the communities or organizations involved and by the individuals volunteering though the ICV Network.

## *For More Information:*

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