

Workflow Support for Volunteer Computing

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Abstract: Volunteer computing is a type of distributed computing in which computer owners donate their computing resources (such as processing power and storage) to one or more "projects". Successful applications that adopted this technique include SETI@Home [1] and Folding@home [2]. Toward this idea in this project the candidate will design and implement a generic Workflow plug-in for accessing one of the popular volunteer computing middleware. The software that will be targeted in this project are JOpera [3] as workflow system and ExtremeWebCH [4] as volunteer computing middleware. At the end of the project a working prototype is expected. The purpose of this work is to evaluate the status of the art of these developments proposing new architecture and design guidelines. In addition the candidate will contribute to existing open source projects in order to improve the present tools.

Knowledge and Skills: Web Programming, Java Programming and basic knowledge of Distributed Applications.

More Info: <http://www.inf.unisi.ch/postdoc/lelli/VolunteerComputing.html>

References:

[1] SETI@Home: <http://en.wikipedia.org/wiki/SETI@home>

[2] Folding@home: <http://en.wikipedia.org/wiki/Folding@home>

[3] JOpera <http://www.jopera.org/>

[4] ExtremeWebCH <http://www.xtremwebch.net/>