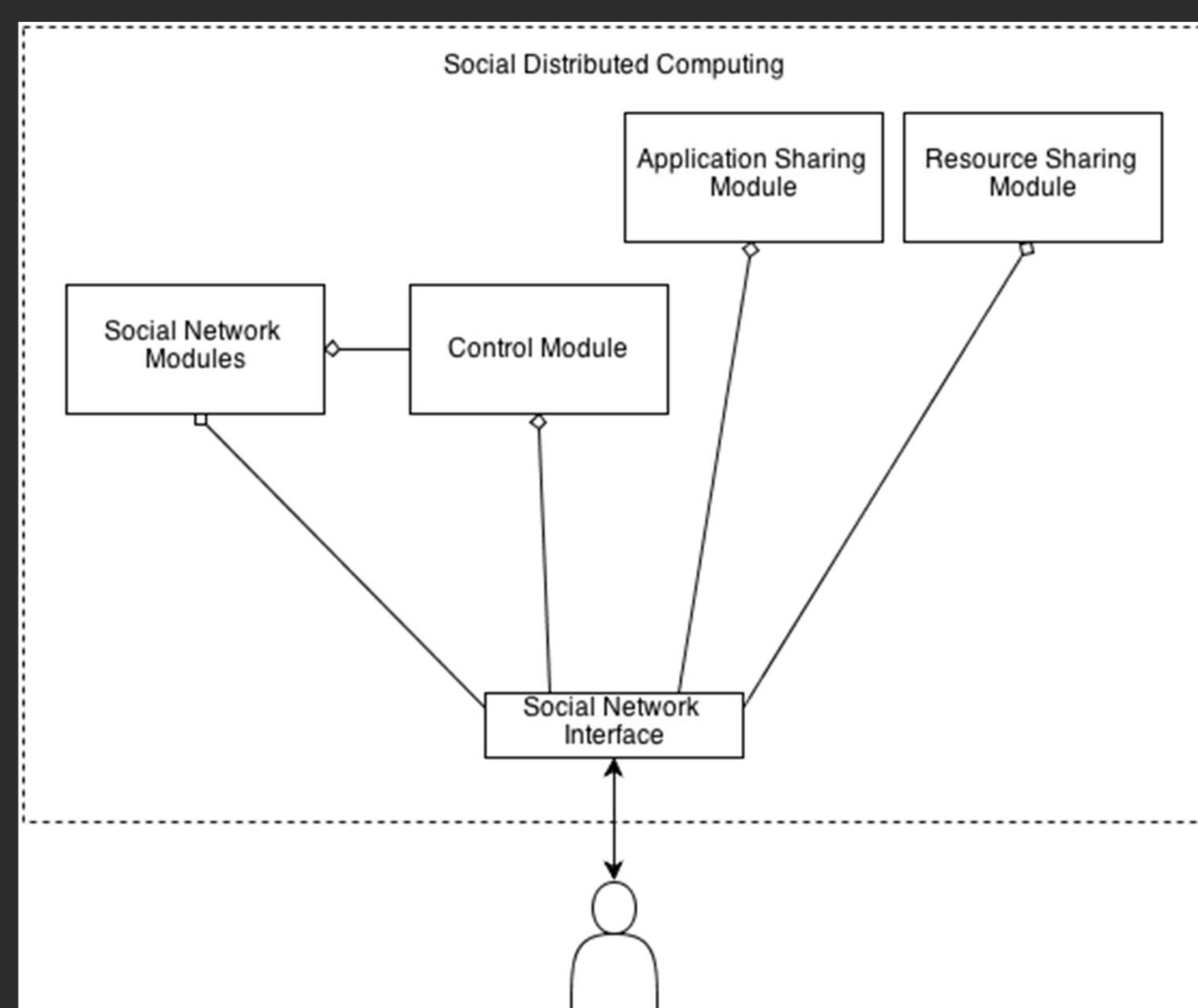


Social Distributed Computing

Overview

Social Distributed Computing is a new computational model combining Online Social Networks with Distributed Computing. By creating a set of services to allow users to perform distributed computing with friends we introduce new functionality into Online Social Networks.

The possibilities for this distributed computing include but are not limited to Application Sharing and Resource Sharing.

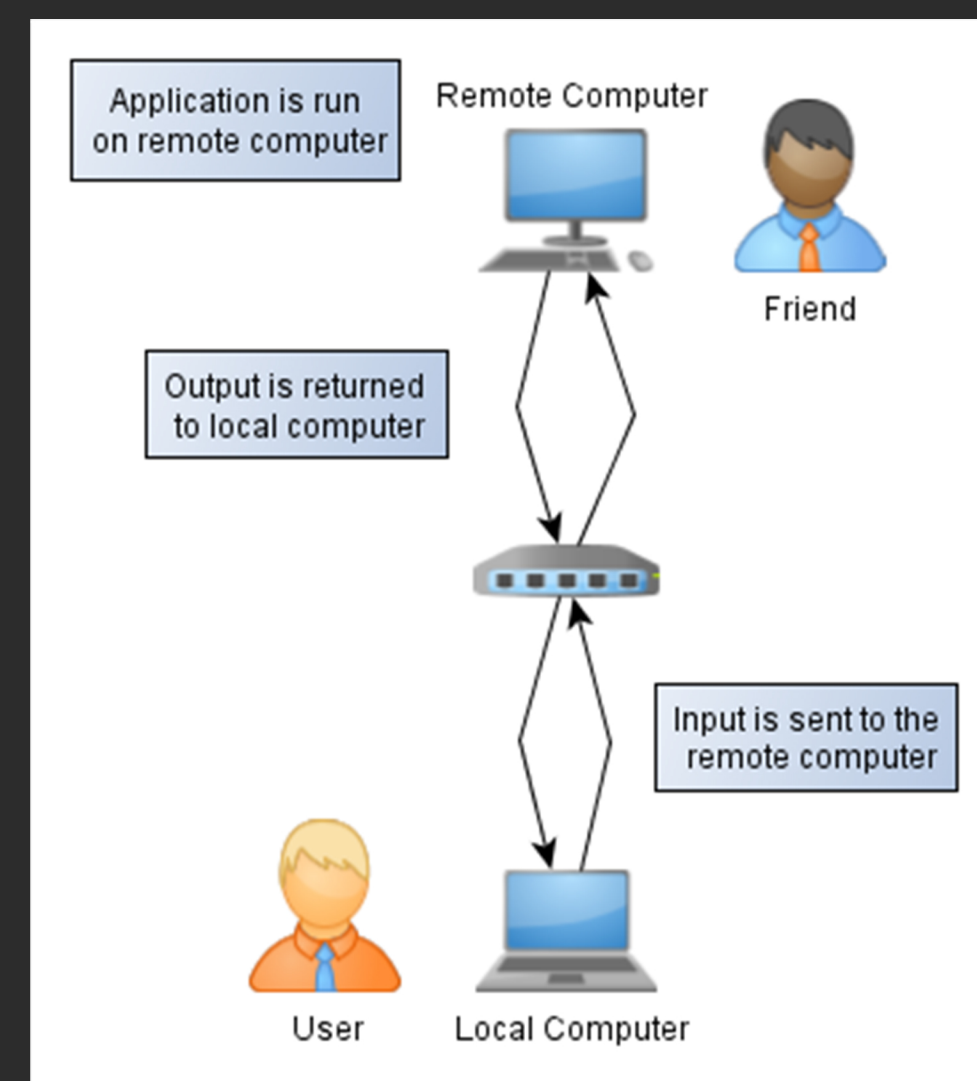


In Application Sharing we have each friend list the applications they own and would be willing to lend to their friends. Each participant then is able to search the list of available applications when they need functionality that no application they own can provide. Once they find a suitable application the program is run on the friend's machine who is providing it and the input and output is streamed through the Social Distributed Computing Service to a the requester who is running a lightweight client such as a web browser.

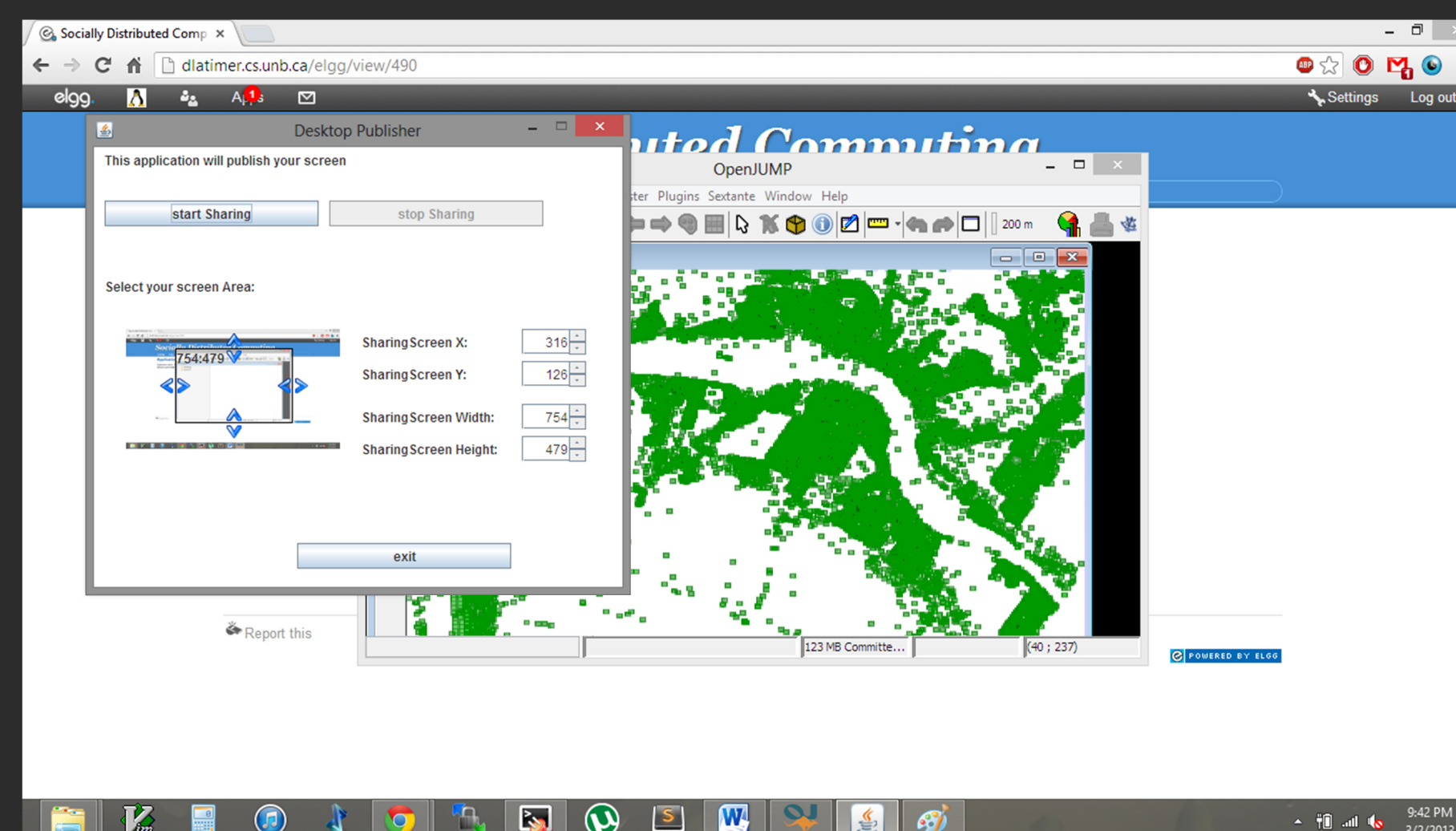
Resource Sharing on the other hand allows friends to share their unused hardware capabilities such as CPU time, Memory, and Storage Space. This provides the opportunity for many possibilities such as Social Cloud Computing or Social Grid Computing. In Social Cloud Computing a cloud environment can be run on top of a set of friends computers, while in Social Grid Computing a grid of computers are available to execute applications when a job needs to be completed quickly.

Social Application Sharing

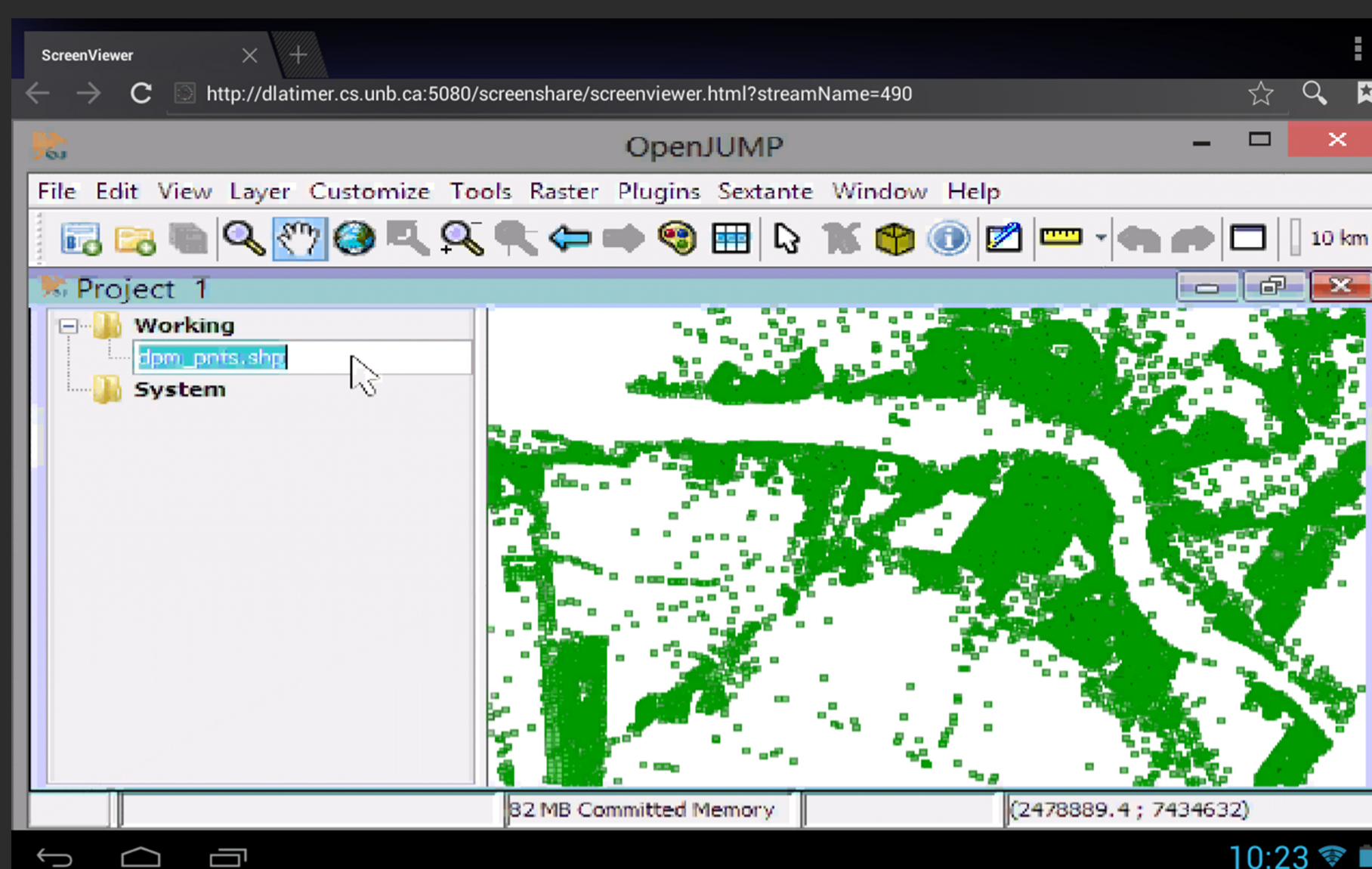
With Social Application Sharing one user can borrow the use of an application from a friend. This is accomplished by running it remotely on their providing friend's machine and redirecting the input and output through the Social Distributed Computing Service.



Here is a screenshot of the provider selecting the area of their screen they wish to share. This area is streamed through the service and control of the mouse and keyboard for this area is provided.



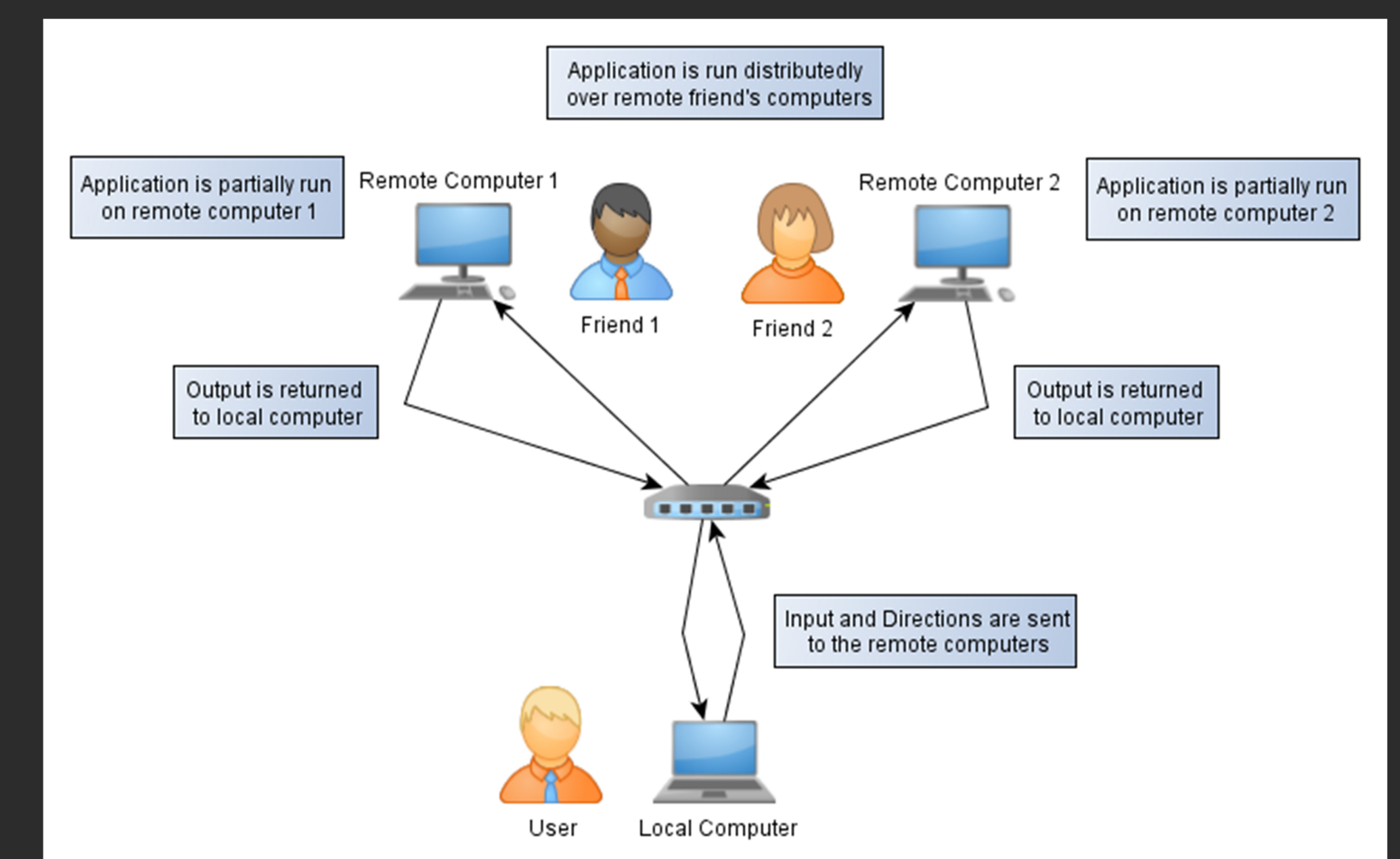
This screenshot was taken from the requesting friend's machine. Here you can see the user accessing the shared application through a web browser, in this case on an Andoird tablet.



Resource Sharing

Resource sharing can take many forms, in the simplest example, some friends of a user volunteer some of their computing resources such as CPU time to let their friend run an application on their machine.

This could be turned into a grid computing platform where the nodes in the grid are supplied by the user's friend's machines. This would make grid computing accessible to everyday people which could allow for applications to take advantage of larger resource pools.



Another example might be to use the shared resources to allow users to store files over a network of friends machines.

This could be a useful way to provide a redundancy factor for important data such as family photos to prevent their loss in the case of fire, or hard drive failure.

