

Project Title: Crowdcasting with Online Games

Project Mentor: Professor Charles Cusack, Computer Science Department

Project Description

Crowdcasting is a technique for problem solving which involves broadcasting a problem to the multitudes along with some incentive to solve it, followed by collecting and evaluating the solutions provided by the willing participants. In our case, the hook is an online game, and the problems are related to graph theory.

Specifically, we are working on a game, Pebble It, which allows players to help solve problems related to graph pebbling. The player is presented with real graph pebbling problems and asked to solve them. Not only can the players help us solve actual problems, but we can study how they play in the hopes of implementing more efficient algorithms to solve the problems. You can see the current state of the game at <http://pebbleit.hope.edu>.

We are interested in two types of students: someone with artistic ability to help with the graphics in the game and on the website, and someone with programming ability to help design and implement code for the game.

Background: Candidates should have at least one of the following (please describe in your application):

1. Artistic ability and experience with some graphical design software.
2. Experience with HTML and other web-related technologies.
3. Experience with Java—especially experience with Swing/GUI programming.
4. Familiarity with PHP and/or MySQL.