4-20-2011

Circle the Cat: Developing Intelligent Strategies for a Simple Two-Player Game

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Circle the Cat is an adaptation of the classic mathematical puzzle Qudraphage in which a cat attempts to escape a hexagonal board, but after each move one hexagon is blocked. We have coded a simulation of this classic puzzle. The result of our development allows for the implementation of varying strategies to computationally examine their effectiveness. The code itself, though extensive, is open enough for additions/extensions to be added fairly easily. Analysis of simpler strategies has allowed for improvement of both Cat and Player AI systems. We are currently looking at implementing more advanced systems, perhaps turning to machine learning.

Information about the Authors:
Kirk Baly and Owen Prough are junior math/computer science majors. This is their second year on this project. Michael Lay is a freshman computer science major. Their goal for this project is to develop intelligent strategies and analyze the "winnability" of certain initial board configurations.

Faculty Sponsor: Dr. James Caristi

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