First Annual General Game Playing Competition

Held in conjunction with the
Twentieth National Conference on Artificial Intelligence

Pittsburgh, Pennsylvania

Sponsored by the American Association for Artificial Intelligence

General game players are computer systems able to accept formal descriptions of arbitrary games and able to play those games effectively without human intervention. General game playing systems are characterized by their use of general cognitive information-processing technologies (such as knowledge representation, reasoning, learning, and rational behavior). Unlike specialized game playing systems (such as Deep Blue), they do not rely on algorithms designed in advance for specific games.

The Competition

The AAAI competition is designed to test the abilities of general game playing systems by comparing their performance on a variety of games. The competition will consist of two phases: a qualification round and a runoff competition.

In the qualification round, entrants will play several different types of games, including single player games (such as maze search), competitive games (such as tic-tac-toe or some variant of chess), games with both competitors and cooperators. In some cases, complete information of the board will be available (as in chess or tic-tac-toe); in others, only partial info will be available (as in battleship). In some cases, the game will be exhaustively searchable (as in tic-tac-toe); in other cases, this will not be possible (as in chess). Players will have to handle all of these possibilities. Entrants will be evaluated on the basis of consistent legal play, ability to attain winning positions, and overall time; and the best will advance to the second round.

In the runoff round, the best of the qualifiers will be pitted against each other in a series of games of increasingly complexity. The entrant to win the most games in this round will be the winner of the overall competition.

Note that, prior to the competition, players will be told nothing about the games to be played. The rules of all games will be transmitted to the players electronically at the beginning of each game. Game playing systems must be able to read the rules for each game, receive runtime information from the game manager, and inform the manager of its moves.

Prize and Eligibility

A $10,000 prize will be awarded to the winning entrant. The competition is open to all computer systems, except those generated by affiliates of Stanford University. Sorry, no human players allowed.

More Information

The competition website, (http://games. stanford.edu), contains further details, including the description of the underlying framework, the game description language, and the programmatic interfaces necessary to play the games.