Judges' Commentary: The Quick Pass Fusaro Award Paper

Peter Anspach
National Security Agency
Ft. Meade, MD
anspach@aol.com

Kathleen M. Shannon
Dept. of Mathematics and Computer Science
Salisbury University
Salisbury, MD 21801
kmshannon@salisbury.edu

The most distinctive feature of the Quick Pass Fusaro Award paper (summary on preceding p. 353) by the team from MIT was its creativity. The basic problem was a queueing problem, which the team members recognized and addressed. However, rather than choosing as their objective minimizing time spent in line, the team made a real effort to model human behavior and to maximize enjoyment. Although the judges questioned whether they had appropriately applied the Nash equilibrium, we were impressed by the idea of using game theory. The team referenced attempts by "real-world consultants" to simulate human behavior in virtual worlds.

Basically, the team simulated behavior by creating virtual visitors to their virtual theme park, giving them randomly generated preferences and tolerances. They then ran a simulation to find optimal parameters for the park itself, under various schemes for the QuickPass system.They treated visitors as individuals employing individual strategies but acknowledged that their assumption might not model reality fully, since people tend to come to theme parks in groups and group dynamics would definitely have an influence.

The team certainly developed the one of the most sophisticated and detailed models to address the problem, made well-thought-out and well-explained assumptions, went through all of the steps of the modeling process, and presented a well-written report. The purpose of the Fusaro Award is to recognize just such activities.

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