

## Project #3: TAC Travel Agents

Your assignment is to design a team of agents that can trade for travel-associated goods in order to satisfy the preferences of a number of clients. We will use the simulator designed for the Classic Trading Agent Competition (TAC) to test your agents by pitting them against each other in a tournament during our scheduled final exam period. This will be a team project with three teams of two or three people each.

### Important dates:

Form your team	Monday, Nov. 9
Tournament	Monday, Dec. 14 (our scheduled exam time)

### Forming teams:

You must decide on who your teammates will be by Monday, Nov. 9. As I said before, each team should consist of two or three people. Please notify me of both your team name and the names of your team members. If any of your team members need accounts on the department's Solaris machines, please mention that and provide their Lehigh user ids.

### Getting started:

In order to do well on this project, you will have to spend a lot of time designing and programming, so get started right away. I highly recommend that every team use the TAC Classic AgentWare (in Java) as a starting point for this agent. You can download this code from the TAC website. I also recommend that you review some of the publications on the TAC website in order to learn about different strategies teams have used in the competition. As you develop your agent, you should use the TAC Servers (available from the TAC website) to test your agent. You can either play against the dummy agent, any other agents you can find executables for, or schedule games against other teams. Keep in mind that your agent cannot make any assumptions about the power of the machine it will run on, the load on that machine, or about network latency. Thus, one of your agent's activities should be to determine its bidding cycle time.

### Rules:

Your agents are subject to the rules of the most recent version of TAC Classic (the rules for the 2004 competition). As long as your agent plays by these rules, you are free to design your agent in whatever way you think gives you the best chance of winning. You are also free to discuss any aspect of the project with other teams, but since you will be competing against them, you may lose advantage by doing so. The only code you may reuse is the TAC Classic AgentWare. If you have chosen not to program in Java, and think you have found an equivalent base implemented in your language, then please seek my approval before you using it.

### The Lehigh TAC Tournament:

In order to put your agents to the test, we will have a tournament in which they face off against each other. For the tournament, the server will be hosted on one of the department's Solaris machines, each team will run its agent on one of the other Solaris machines. Dummy agents will play any slots not occupied by an actual team. We will play the game five times, with at least five minutes between games. This time can be used by teams to adjust configuration parameters

of their agents. The winner will be the agent who has the highest sum of scores considering all five games. The tournament is scheduled for Monday, Dec. 14 from 8-11am (during our scheduled final exam period). I strongly suggest that all members of your team be present.

**Final Submission:**

Your project is due at the start of the tournament. You must provide electronic versions of source code, a Solaris executable (if your agent is in Java, then an executable JAR file will suffice), and a five to ten page report, double-spaced. The report should describe your team's design, and should include a short section on what each person contributed to the project. In addition, each team member will be asked to fill out a team evaluation form in which they rate their own contributions and that of the other members on the team. These evaluations will play a factor in your individual grade.

**Grading:**

Grading will be based on how your team performs in the tournament, the quality of your design, and its originality. Part of your individual grade will also be based on your own self evaluation and the evaluation of your performance by your teammates. The breakdown of grades is as follows:

Team grade	90%
Individual grade	10%