Multiagent Learning in the Presence of Agents with Physical and Rational Limitations

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Thesis Proposal Outline

1. Introduction
   - *(a) Motivation*
   - *(b) Overview of Solution*
   - (c) Contributions
2. Background and Related Work
   - (a) Stochastic Game Framework (ICML '00a)
     - i. MDPs
     - ii. Matrix Games
     - iii. Stochastic Games
   - (b) Static Solutions (ICML '00a)
     - i. Shapley
     - ii. Avi-Itzhak
     - iii. Minimax-Q
     - iv. Hu & Wellman
   - (c) Learning Solutions (ICML '00a)
     - i. Fictitious Play
     - ii. Opponent Modelling
     - *iii. Smooth Fictitious Play*
     - *iv. Exp3*
   - *(d) Other Related Work*
     - *i. Evolutionary Game Theory*
     - *ii. Carmel's DFA Limitations*
3. Previous Work
   - (a) Nash-Q Problems (ICML '00b)
   - (b) Rational/Convergent Learning (AAAI '00)
   - (c) Limitations in Learning (IJCAI '99)
4. *Proposed Work*
   - *Guaranteed Work*
   - *Probable Directions*
   - *Evaluation*
5. *Conclusion*