Preface

The FAABS Workshop was conceived at NASA Goddard Space Flight Center while the Agent Technology Development Group in the Advanced Architectures and Automation Branch (Code 588) was developing a prototype agent community to automate satellite ground operations. During the development of this system, several race conditions arose within and between agents. Due to the complexity of the agents and the communications between them, it was decided that a formal approach was needed to specify the agents and the communications between them, so that the system could be checked for additional errors.

A formal model of the inter-agent communications was developed, with the expectation that this would enable us to find more errors. Success on this convinced us of the importance of using formal methods to model agent-based systems. To share our own experiences and to learn how others were approaching these issues, we decided to hold a workshop on formal methods and agent-based systems.

The response was overwhelming. We intentionally limited numbers to encourage discussion and interaction. Invitations were issued on the basis of either a paper abstract, or a position statement explaining the author's interests and experience. The response was so great that we had to increase the number of invitations dramatically, and limit participation to one author per paper.

The workshop was a successful gathering of people from all over the world to discuss formal approaches to agent-based systems. The wide range of approaches and many interesting interactions of the participants made the workshop a rewarding experience. Posters, paper presentations, panels, and the invited talk by J Moore stimulated much discussion.

The proceedings contains both papers and write-ups of the poster presentations and panel discussions. It also includes author contact information to help further information sharing.

We would like to express our sincere thanks to all those who attended the workshop, presented papers or posters, and participated in panel sessions and both formal and informal discussions. Our thanks go to the NASA Goddard Code 588 for financing the workshop. Additionally, thanks go to the Naval Research Laboratory and to DARPA for their active support of the workshop.

Our thanks also go to Springer-Verlag for their assistance and interest in publishing the proceedings of this first Workshop on Formal Approaches to Agent-Based Systems.

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