Third International Conference on Knowledge Systems for Coalition Operations (KSCO-2004)

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Abstract. The KSCO-2004 conference will bring together practitioners and key decision makers in coalition operation management together with researchers from areas of knowledge representation and reasoning, planning and multi-agent systems in order to exchange experience and ideas, share inspiration and suggest novel concepts. Practitioners will benefit from meeting each other and from learning possibilities of research achievements while researchers will get inspiration from each other and potential end users of their ideas.

1 Introduction

KSCO - Knowledge Systems For Coalition Operations is an international working group exploring research in Knowledge Systems for Coalition Operations. Biennially, KSCO organizes a technical conference where practitioners and key decision makers in coalition operations management meet and discuss with researchers from areas of knowledge-based systems, planning and multi-agent systems, exchange experience and ideas, share inspiration and suggest novel concepts. It can also lead to joint project proposals. After very successful events in Edinburgh, UK and Toulouse, France the KSCO conference in 2004 will be organized at IHMC, Pensacola, Florida. KSCO 2004 welcomes submission of original research papers from the areas of knowledge-based systems, coalition formation and multi-agent systems related to coalition operations management. We will review theoretical, experimental, methodological papers as well as case studies, prototype evaluations and application reports. KSCO organizers particularly encourage submission of reports presenting larger coalition related national and international project and programmes. The IEEE Intelligent Systems editorial board has agreed to consider the best KSCO-2004 papers for publication. The KSCO programme committee will invite the authors of the best papers to submit them to the full review process of IEEE Intelligent Systems.

1.1 Areas of Conference

Suggested topics to be discussed include but are not limited to:

- innovative theory and techniques for coalition formation [4]
- requirements for knowledge-based coalition planning and operations
- knowledge-based approaches to command and control
- knowledge-based approaches to coalition logistics
- applications and requirements for knowledge-based coalition planning

- knowledge-based approaches to Operations-Other-Than-War [3]
- multi-agent systems and the concept of agency in coalitions
  - tools and techniques for knowledge-based simulation and modeling of coalition operations
  - security and maintenance of private information or knowledge in coalition operations [1]
- autonomous vs. centrally managed coalition operations [2]
- mobility, agile and autonomous computing in coalition operation
- complexity issues and scalability in coalition operations
- deployed systems, case studies

Participation will be by invitation of the organizing committee and there will be a limited number of attendees to encourage a productive exchange of ideas between those involved.

The interested authors shall submit either long (8 pages in the proceedings) or short (4 pages in the proceedings) papers describing the work on knowledge systems for coalition operations. Short papers are particularly suitable for project/programmes introduction, descriptions of demonstrations and prototypes.

References

[1] B. Bell, Jr. S. Santos, and S. M. Brown. Making adversary decision modeling tractable with intent inference and information fusion. In *Proc. of the 11th Conf on Computer Generated Forces and Behavioral Representation*, Orlando FL, May 2002.

[2] P. Maes. *Designing Autonomous Agents*, chapter Situated agents can have goals., pages 49–70. The MIT Press, Cambridge, MA., 1990.

[3] M. Pěchouček, V. Mařík, and J. Bárta. A knowledge-based approach to coalition formation. *IEEE Intelligent Systems*, 17(3):17–25, 2002.

[4] O. Shehory and S. Kraus. *Lecture Notes in Artificial Intelligence no. 957, From Reaction to Cognition*, chapter Coalition formation among autonomous agents: Strategies and complexity, pages 57–72. Springer-Verlag, Heidelberg, 1995.