

Introduction to Negotiation Support Systems Minitrack

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Negotiation Support Systems (NSS) are designed to assist negotiators in reaching mutually satisfactory decisions by providing a means of communication and through analysis of available information. The purpose of this minitrack is to provide a forum for interchange of ideas, research results, development activities, and applications among academicians and practitioners in the NSS field. Since 1991, this minitrack has gathered a respectable collection of papers in this young but promising area of research. Collectively, the selected papers in this minitrack continue to offer innovative and thought-provoking research in computer-supported negotiation, mediation and bargaining.

We continue to explore the role of negotiation support in the knowledge-based and technology-driven economy. As information technology continues to forcefully affect all aspects of human activities, its impacts on the decision making process is such that the cognitive process has been profoundly affected by the quality and quantity of information made available, the speed of computation and information exchange, and perhaps most innovatively, the increasing use of the Internet to promote trade, for example, electronic market places for both digital and non-digital goods and services. In particular, most of the accepted papers focus on two emerging issues of the new economy.

Six papers were selected for this year. Soumyakanti Chakraborty et al. opens the minitrack with a paper on combinatorial auctions. In particular, they discuss the introduction of uncertainty in the assessment of bundles of goods in that the auctioneers are not required to reveal the exact valuation at the beginning of the session. Their algorithm appears to have yielded higher utilities for the bidders.

Vahidov and Neumann report the latest improvement in their DSS or managing Service Level Agreement Negotiations. Situated decision support systems effectively combine human judgment with autonomous decision making and action by agents. The intuition of using this approach for SLA

negotiations lies in the monitoring and controlling of the fleet of local agents negotiating single services from multiple service providers by the use of a “manager” agent and human decision maker. We show through numerical experiments that the approach performs well under a set of simplifying assumptions. The next research is presented by Gaspoz and Pigneur. They use prediction markets as negotiation agents for supporting R&D portfolio management. They iteratively designed, developed, operated and evaluated several prototypes to predict markets in different settings.

An innovation in this year minitrack is a combined session with the emergency response minitrack. The first paper in the second session addresses the issues related to cross-cultural dyadic e-negotiation. Lai et al. use content analysis to study cross-cultural issues in e-negotiations. They collected data from 80 e-negotiations from eight countries and categorize them in nine categories. The idea is to uncover areas where cultural difference might play a role.

Plotnick, Ocker, Hiltz and Rosson explore the nature and roles of leadership in partially distributed emergence response software development teams. A partially distributed team is a virtual team in which some sub-groups are co-located and other dispersed. In their pilot study, they found that leaders adopt a variety of roles to include the broker, coordinator, monitor, producer, and integrator. They also found that the PDT structure led to considerable in-group/out-group divides when time zone differences make synchronous communication difficult. Finally, Doong and Wang present the preliminary results of their online experiment on the adoption of online NSS using Foxall’s framework. They found that people who are categorized as being more involved innovators tend to adopt the technology more than others.

All together, the six papers selected for this year, highlight the increasing needs for negotiation support in the information-intensive economy.