

Negotiation or Auction? The NorA project

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Nora is a joint project between Concordia University, Canada, and University Karlsruhe, Germany, through which a group of researchers of Auction and Negotiation meet together in order to deeply investigate the differences and possible impacts of the use of different electronic market mechanisms. The objective of the project is to build a comprehensive research framework and knowledge base from multiple discipline perspectives (e.g. economics, behavioral science, psychology, information system (IS) research, computer science, etc), through continuous and accumulative work. The research under this project would bring valuable knowledge and support to businesses, helping them to do better decision in transactions, especially in the cyberspace (Malone et al., 1987), whereby the appropriate use of electronic market transaction system and mechanisms would further increase social welfare and better satisfy agents with the transaction process if possible (Smith, 1982).

Our first aim is to establish a framework that would allow the comparison of transaction mechanism (auction vs. negotiation). In the literature research phase, we encountered the problem of embeddedness, meaning that whichever mechanism under investigation is necessarily embodied in a market system. From an economic perspective, we can argue that the system is the vehicle through which the mechanism drives the market. Whereas from an IS perspective, the mechanism is the rules of encounter, a part of a larger artifact, the system. Therefore, our problem became amplified not only with the notion of comparing mechanisms, but also that of comparing systems. We established the TIMES framework, where the antecedents for study are Task, Individual, Mechanism, Environment and System. The consequences are both subjective and objective variables measuring IS and economic outcomes. In a series of experiments, we debut by examining the difference between multi-attribute, English auctions with multi-attribute, multi-bilateral negotiations.

Framework:

The TIMES framework examines the interaction among task, individual(s), mechanism, environment and system(s) in terms of system usages and economic behaviors in order to achieve a market transaction, as measured by substantive and relationship-based outcomes. This framework is depicted in figure 1. NorA is an instantiation of TIMES, such that the

mechanism and system are varied in hopes of understanding the intervening and dependent variables affected by these two independent variables.

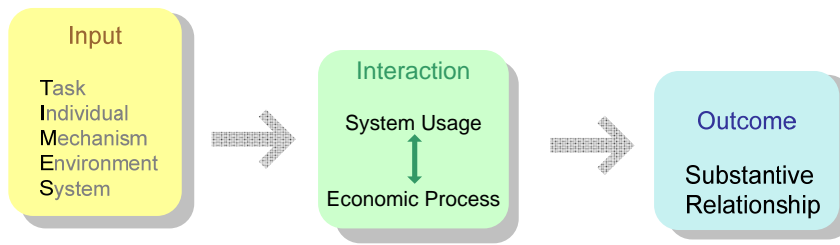


Figure 1. Times framework

Research Design:

The system comparison consists of assessing the difference between meet2trade (i.e., an auction platform designed with a parameter methodology to support market trades) by Weinhardt et al. (2005) and Invite (i.e., a negotiation platform designed with a component-based methodology for mostly bilateral negotiations) by Strecker et al. (2006). The mechanism comparison is between a multi-attribute, English auction and multi-attribute, multi-bilateral negotiations. Figure 2a and 2b shows the different mechanisms, whereby a contract is negotiated between a musician agent (Fado) and three entertainment company agents (Mosico, Cory and Uli).

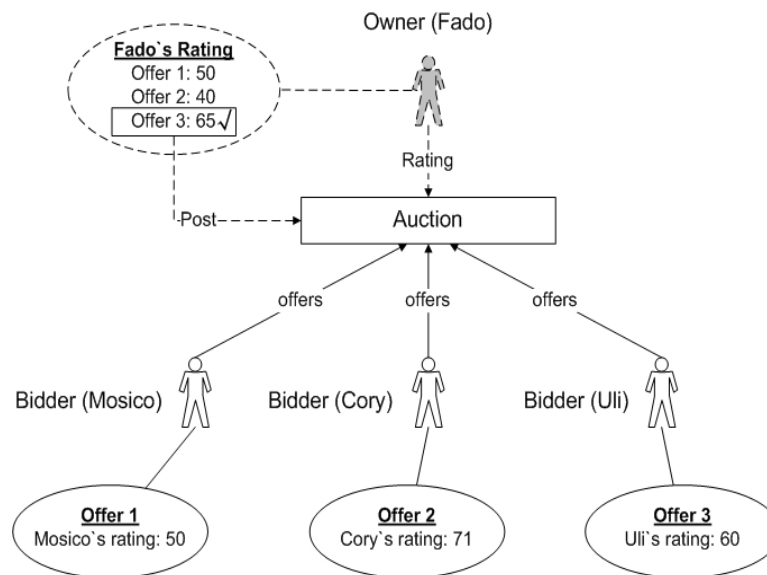


Figure 2a. Multi-attribute English Auction

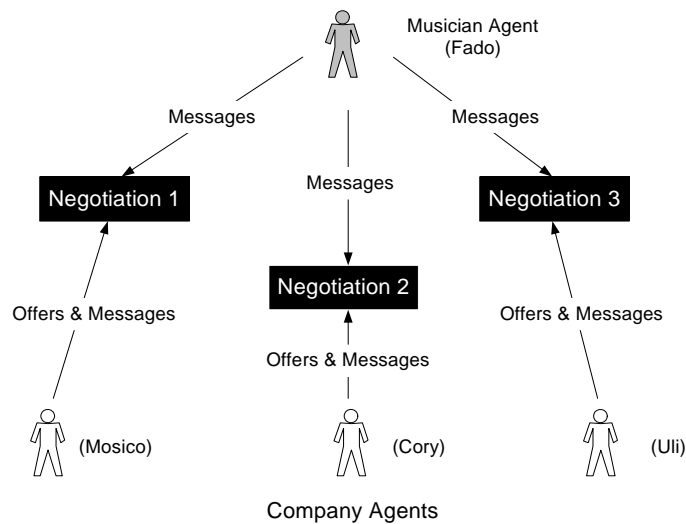


Figure 2b. Multi-attribute Multi-bilateral Negotiation

Work In Progress:

At the present, we are collecting data for this initial study. We hope to have responses from 600 subjects by the end of May 2007. Based on the data analysis, we expect to streamline our search to better isolate key variables that influence economic choice, attitudes, beliefs and perceptions of mechanism and system.

References

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