Agent strategies: for sellers to satisfy purchase-orders, for buyers to select sellers[*]

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Abstract

Electronic trade introduces agents—sellers and buyers—with multiple challenges. In this paper we address one of these challenges. We provide new understandings regarding strategies that agents, each representing a buyer or a seller, can use in dynamic electronic markets. In particular, we examine strategies for sellers to decide which purchase-orders to satisfy in the face of stock shortages. We also study buyers' strategies for selecting sellers given their order satisfaction. We provide a simulation tool to analyze such strategies and to unravel equilibria among them, in particular in cases where formal analysis is too complex. Findings of experiments we have performed suggest preliminary principles for designing strategies for automated buyers and sellers.