ICT10-002 - Challenges in Sponsored Search Auctions

Abstract

In 2009 about 50 billion dollars were spent worldwide on online advertisements. A large fraction of this money was spent on advertisement on the result pages of search engines, which are sold based on sponsored search auctions. While the properties of standard auctions are well understood, sponsored search auctions pose novel challenges because the bidders have a variety of different goals and constraints. In addition, advertisers only have to pay when a user clicks on their advertisements. Thus constraints imposed by user behavior have to be considered as well. This proposal plans to perform a comprehensive study of sponsored search auctions, taking into account all three involved parties, the advertisement system, the advertisers and the users. The immediate goal is to influence the design of future online advertisement systems and the bidding strategies of advertisers. Due to the interdisciplinary character of this research our results will also shed new light on problems of interest to economists, social scientists, and game theorists.

Keywords:
Algorithmic game theory, electronic commerce, theoretical computer science

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Further links to the persons involved and to the project can be found under
https://www.wwtf.at/funding/programmes/ict/ICT10-002/