

Department of Information and Systems Management  
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Seminar Announcement

***Ex-Ante Information and the Design of Keyword Auctions***

*by*

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**Time: 11:00 am – 12:30 pm**

**Venue: Room 3399 (L17/18)**

~~~~~ All interested are welcome ~~~~~

**Abstract**

Keyword advertising, including sponsored links and contextual advertising, powers many of today's online information services such as search engines and Internet-based emails. This paper examines the design of keyword auctions, a novel mechanism that keyword advertising providers such as Google and Yahoo! use to allocate advertising slots. In our keyword auction model, advertisers bid their willingness-to-pay per click on their advertisements, and the advertising provider can weigh advertisers' bids differently and require different minimum bids based on advertisers' click-generating potential. We study the impact and design of such weighting schemes and minimum-bids policies. We find that weighting scheme determines how advertisers with different click-generating potential match in equilibrium. Minimum bids exclude low-valuation advertisers and at the same time may distort the equilibrium matching. The efficient design of keyword auctions requires weighting advertisers' bids by their expected click-through-rates, and requires the same minimum weighted bids. The revenue-maximizing weighting scheme may or may not favor advertisers with low click-generating potential. The revenue-maximizing minimum-bid policy differs from those prescribed in the standard auction design literature. Keyword auctions that employ the revenue-maximizing weighting scheme and differential minimum bid policy can generate higher revenue than standard fixed-payment auctions. We draw managerial implications for pay-per-click and other pay-for-performance auctions and discuss potential applications to other areas.