

Technical Disclosure Commons

Defensive Publications Series

January 23, 2017

ADVERTISING BIDDING INVOLVING OVERLAPPING BIDS

Justin Lewis

Scott Davies

Follow this and additional works at: http://www.tdcommons.org/dpubs_series

Recommended Citation

Lewis, Justin and Davies, Scott, "ADVERTISING BIDDING INVOLVING OVERLAPPING BIDS", Technical Disclosure Commons, (January 23, 2017)
http://www.tdcommons.org/dpubs_series/381



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

ADVERTISING BIDDING INVOLVING OVERLAPPING BIDS

ABSTRACT

An improved advertising bidding system can be used to determine a winning advertising bid in a situation with overlapping advertising bids. The system also determines a price, i.e., cost per click, of the winning advertising bid. The system receives advertising bids for an advertising space from one or more advertisers. The advertising space can be, for example, a part of a website or a series of webpages devoted to online advertisements. Each advertiser is associated with an advertiser ID. The system ranks the received advertising bids based on a value of each advertising bid. The system identifies a first highest advertising bid, among the ranked advertising bids, associated with a first advertiser ID. The system further identifies a next highest advertising bid, among the ranked advertising bids, associated with a second advertiser ID. The system then checks whether the first and the second advertiser IDs are same or not. If the advertiser IDs are same, the system continues to identify the next highest advertising bid among the ranked advertising bids. When the system determines that the advertiser bids are different, the system determines cost per click (CPC) for the first highest received advertising bid based on a predicted CPC value of the next highest advertising bid and predicted click through rate (CTR) of the first and the next highest advertising bid.

PROBLEM STATEMENT

The online advertising auction/bidding process is a critical advertising process through which third party advertisers bid and purchase advertising impressions online. Currently, an inefficiency exists in the advertisement bidding process for advertisers running multiple

advertising campaigns. In the existing systems, advertisers are ranked in the advertising bidding process by effective cost per thousand advertising impressions (eCPM). eCPM is used as a tool by ad publishers to compare ad networks or evaluate the success of an ad-based monetization strategy. eCPM is calculated as - (Total advertising Earnings/advertisements impressions) x 1000. The advertiser with the highest eCPM wins the bidding process/auction, but its cost per click (CPC), the price that an advertiser pays to the publisher of the ad when the advertiser's ad is clicked, is calculated based on the eCPM of the second highest advertising bid in the advertising bidding process. By using such a pricing model for the bidding/auction process, the advertisers are only charged the low threshold price (CPC for second highest eCPM advertiser) than what is necessary to win the bidding for the ad impression.

However, if an advertiser is running multiple advertising campaigns by, e.g., employing different agencies, these multiple advertising campaigns could bid against each other in a single bidding process. If two such advertising campaigns from the same advertiser bid the two highest prices in the auction, the advertiser will end up paying the price of its second highest bid, and the highest bidding campaign will have its ad run. As such, the advertiser ends up paying more for the advertising space and also does not get to choose between their two highest campaigns that won the bidding process. This process is inefficient for advertisers, potentially resulting in higher costs. Also, it may be beneficial for advertisers to have the second highest bid (by eCPM ranking) advertisement run instead of the highest bid advertisement.

Advertisers generally avoid abovementioned situations by exercising strict control over their bids. Advertisers often manually track keywords, in order to avoid separate campaign bids in same advertising bidding process. Also, if advertising is managed by multiple employees of

the advertisers, the employees may need to share a campaign rather than each employee running his/her own campaign in order to avoid keyword (used to identify a current bid process) collisions. This may require advertisers to use a delegated account structure for its employees which is a less secure method.

There are opportunities to improve advertising bidding process in order to avoid abovementioned scenarios.

DETAILED DESCRIPTION

The systems and techniques described in this disclosure relate to an improved advertising bidding system that can be used to determine a winning bid and a price of the winning advertising bid in case of overlapping advertising bids. The system can be implemented for use in an Internet, an intranet, or another client and server environment. The system can be implemented locally on a client device or implemented across a client device and server environment.

Fig. 1 illustrates an example method (100) to determine a winning advertising bid for an advertising space in case of overlapping advertising bids. The system receives (102) advertising bids for an advertising space from one or more advertisers associated with one or more respective advertiser IDs. The advertising process is a real time bidding process in which the advertisers bid on the advertising space. The advertising space can be, for example, a part of a website or a series of webpages devoted to online advertisements. A website publisher can put an advertising space on their website up for advertising auction/bidding process. Advertisers generally run online ad campaigns for advertisements such as: text ads, display ads, banner ads,

interstitial ads, etc. In the ad bidding process, the advertiser with the highest bid for the advertising space wins and their ad is instantly displayed on the ad publisher's advertising space.

A typical ad bidding process begins when a user visits a publisher's website. This action triggers an ad bidding process request that goes from the publisher to an intermediary ad exchange, that submits the request and the accompanying data to multiple advertisers. The accompanying data includes various pieces of data such as user's demographic information, browsing history, location, the web page being loaded, etc. After receiving the request, the advertisers automatically submit their bids in real time in order to place their ads on the publisher's website. The advertisers can also submit a maximum advertising bid for a campaign as well. The bid can be fixed across various demographics as well. The bids indicate a price that an advertiser is willing to pay the publisher in order to have his/her ad run on the publisher's website.

After receiving the advertising bids, the advertisement bidding system ranks (104) the bids based on a value of each advertiser's received advertising bid. The system identifies the one or more advertisers using their respective advertiser IDs. Each advertiser in the auction/bidding process is associated with a unique advertiser ID.

The system identifies (106) a first highest advertising bid, among the ranked advertising bids, associated with a first advertiser ID. The system selects the advertising bid that has, for example, the highest monetary price for the ad impression space.

Further, the system identifies (108) a next highest advertising bid, among the ranked advertising bids, associated with a second advertiser ID. The system then checks (110) whether the first and second advertiser IDs are same or different. If the advertiser IDs are same, the

system moves back to step (108) and identifies a next highest advertising bid, among the ranked advertising bids. Because the amount that the winning advertiser pays for the advertising space is calculated based on the next highest bid, this step insures that the winning advertising bid amount is not calculated based on the same advertiser's bid. In other words, the advertiser does not compete against itself. The system moves in a decreasing order in the ranked list of advertising bids each time the system tries to identify the next highest advertising bid.

If the system determines that the first and second advertiser IDs are different, then the system determines (120) cost per click (CPC), the price that the highest bidding advertiser pays for the advertising space, whenever its ad will be clicked on the publisher's website. The price is based on CPC value of the next highest advertising bid and predicted click through rate (CTR) of the first and the next highest advertising bids. CTR is the ratio of users who click on a specific link on an advertisement to the number of total users who view the advertisement.

An alternate embodiment is illustrated in Fig. 2 in a scenario when the advertiser ID for the highest and the next highest advertising bids, among the ranked list of advertising bids, is the same. In this embodiment, the system identifies the advertising campaign that should run among the two highest advertising bids with the same advertiser IDs.

The system predicts (208) a click through rate (CTR) for the advertising campaign of the first highest and the next highest advertising bid, respectively. Both these advertising campaign bids have the same advertiser ID. The system identifies (210) the advertising campaign with the highest predicted click through rate and awards the advertising space to this particular advertising campaign. Thus, although the advertiser is not competing against itself for CPC

payment purposes, the advertising campaigns may compete to present the campaign with the highest CTR.

Further to the description above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs, or features described herein may enable collection of user information (e.g. information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the advertiser.

The subject matter described herein can be implemented in software and/or hardware (for example, computers, circuits, or processors). The subject matter can be implemented on a single device or across multiple devices (for example, a client device and a server device). Devices implementing the subject matter can be connected through a wired and/or wireless network. Such devices can receive inputs from a user (for example, from a mouse, keyboard, or touchscreen) and produce an output to a user (for example, through a display and/or a speaker). Specific examples disclosed are provided for illustrative purposes and do not limit the scope of the disclosure.

DRAWINGS

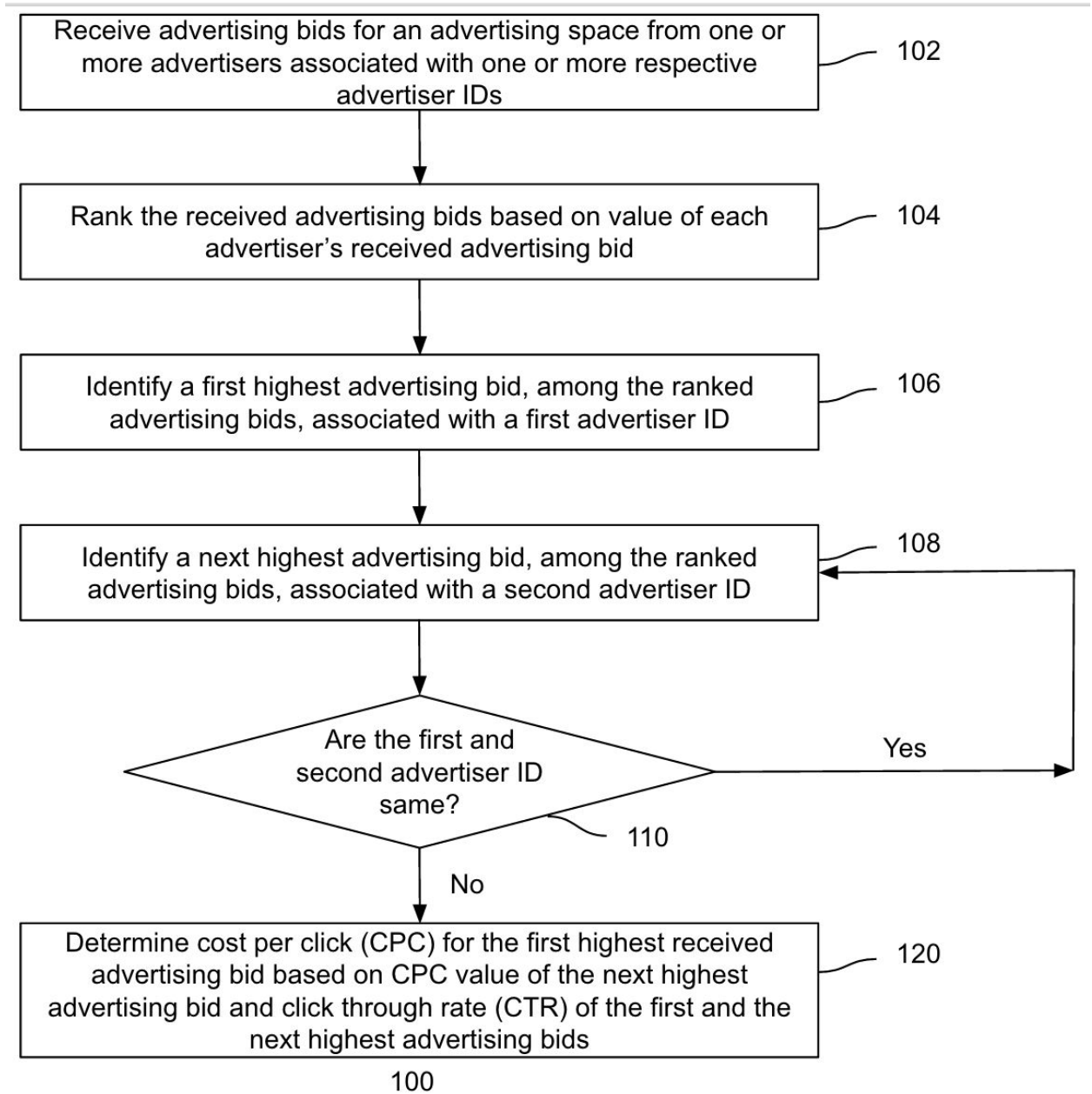


Fig. 1

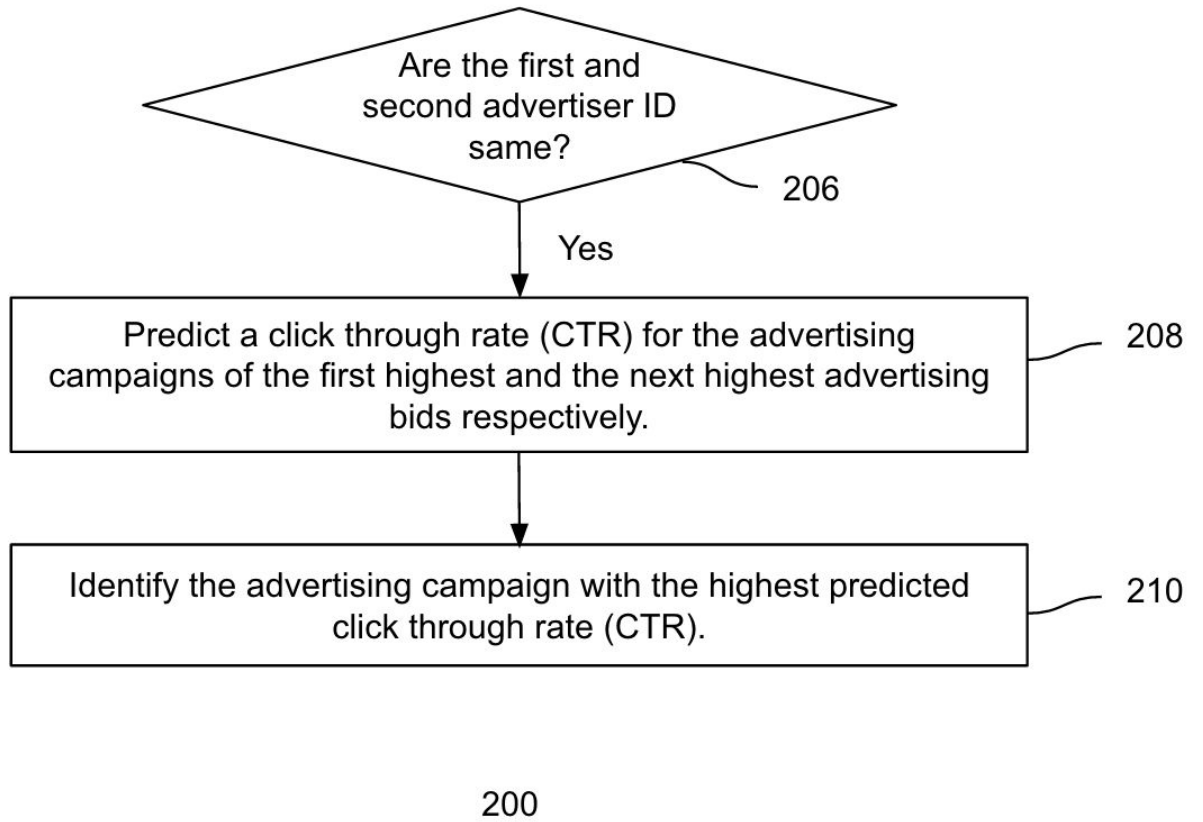


Fig. 2