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Counting Video Ad Opportunities Using The Durations Of Ads And Ad Breaks

ABSTRACT

In static display, an ad opportunity is easily modeled by an ad request. In video, an ad opportunity depends on the duration of the break in the video to be filled and is not readily equivalent to an ad request. The counting of ad opportunities in video is further complicated if the ad is pre-fetched in advance of the ad break. This disclosure describes techniques to accurately count and report ad opportunities in a video based on the durations of ads and ad breaks.

KEYWORDS

- Video advertisements
- Ad opportunity
- Ad break
- Cost per mille (CPM)
- CPM per opportunity
- CPM per second
- Filled ad opportunity

BACKGROUND

In static display, an ad opportunity is easily modeled by an ad request or an ad impression. In video, an ad opportunity depends on the duration of the break in the video that is to be filled, and is not readily equivalent to an ad request. The counting of ad opportunities in video is further complicated if the ad is pre-fetched in advance of the ad break.

DESCRIPTION

Per the techniques of this disclosure, ad opportunities in a video are counted and reported based upon the respective duration of ads and ad breaks and potentially the maximum ads set on that request. A video publishing site or service defines a video ad opportunity as being of a certain duration. The number of ad opportunities in a video ad break is the duration of the ad break divided by the length of an ad opportunity. The length of the ad opportunity is referred to as the duration setting. The video publisher or an ad network that provides ads to the video publisher tracks filled and unfilled ad opportunities based on the ad opportunity count defined herein.

Example: The administrator of a video-hosting site defines an ad opportunity as being 30 seconds long. A video has an ad break of 120 seconds. The ad break represents $120 \div 30 = 4$ ad opportunities.

Example: The administrator of a video-hosting site defines the duration setting to be 15 seconds. A video has an ad break of 120 seconds. The ad break represents $120 \div 15 = 8$ ad opportunities.

In pre-fetched ads, ads that are to be played during the video are provided at the start of the video. Pre-fetched ads are common in on-demand video services. With pre-fetched ads, if a viewer of the video drops off before reaching a certain ad break, ad breaks after the point of drop off do not count towards opportunities. Additionally, if a user skips an ad break, that break does not count toward opportunities. The player logs ad break start events to ascertain ad breaks that have been reached.

With video ad opportunities as defined herein, an ad-opportunities reporting funnel can be developed as follows. Opportunities that are actually available to a publisher equal the total potential opportunities less the opportunities lost to drop-off:

$Opportunities = Total\ potential\ opportunities - Opportunities\ lost\ to\ drop-off.$

Often, the ad opportunities of a publisher are shared with partners; however, a partner may leave some of their ad opportunities unfilled (these are known as fallback opportunities). Thus, the following relationship holds true for opportunities fillable by the publisher:

$$Fillable\ opportunities = Opportunities - Shared\ opportunities + Fallback\ opportunities.$$

The actual number of filled opportunities equals the fillable number of opportunities less opportunities lost, e.g., due to errors or otherwise unfilled:

$$\begin{aligned} Filled\ opportunities &= Fillable\ opportunities - Lost\ opportunities \\ &= Opportunities \\ &\quad - Shared\ opportunities \\ &\quad + Fallback\ opportunities \\ &\quad - Opportunities\ lost\ to\ errors \\ &\quad - Unfilled\ opportunities. \end{aligned}$$

The filled opportunities are filled (or matched) in a variety of ways such as:

- filled using rewarded ads, e.g., ads that reward the viewer for clicking or otherwise interacting with them;
- filled using house-filled ads, e.g., ads that are filled by the owner of the video-hosting site or service, typically for other videos hosted by the service;
- filled using direct-sold ads, e.g., ads that are directly sold by the owner of the video-hosting site or service to advertisers;
- filled using programmatic or auction ads, e.g., ads that are filled by an ad network; etc.

Video ad opportunities can additionally be tracked using the number of filled and unfilled seconds, the cost-per-mille per opportunity, the cost-per-mille per second, the number of capped opportunities, etc.

In this manner, the techniques of this disclosure obtain metrics for video ad opportunities and model a funnel that represents the number of filled and unfilled video ad opportunities.

CONCLUSION

This disclosure describes techniques to accurately count and report ad opportunities in a video based on the durations of ads and ad breaks.

REFERENCES

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