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CONVERSION ATTRIBUTION BASED ON VIEWABLE IMPRESSIONS

A conversion can be any action an advertiser desires for a user to perform, such as purchasing a product, providing desired information, or other types of actions. Conversions can be defined differently for different advertisers. For example, advertiser A may define a conversion as occurring when a user navigates to a signup page. Advertiser B may define a conversion to occur a user signs up for marketing emails. A publisher may provide the infrastructure for an advertiser to track conversions. For instance, an advertiser can embed a (publisher provided) JavaScript snippet that notifies the publisher and/or advertiser when a conversion occurs.

Information regarding the occurrence of conversions is useful for advertisers because it can provide an advertiser insight that can be used to manage the advertiser's campaigns. In some implementations, advertisers may specify a cost per acquisition (CPA), and the publisher may attempt to automatically adjust the cost per click (CPC) bids accordingly. Conversion attribution is essentially deciding which specific ad impression gets credit for a specific conversion. For each conversion, relevant ad events within a conversion lookback window are considered. In some implementations, a conversion may be attributed to the most recent ad click within the configurable lookback window. In some implementations, the configurable lookback window may be defined based on a particular time period (e.g., between 1 to 90 days, with the default of of 30 days).

Many display and video ad conversions are generated by users who see ads and do not click on them while seeing them, but later visit the conversion site. These conversions are called view-through conversions (VTCs). In some implementations, when there is not a click within the conversion lookback window, the VTC may be attributed to the most recent ad impression within the conversion lookback window. In some such implementations, the conversion lookback window is defined as a view through conversion lookback window, and may be configurable (e.g., between 1 to 30 days, with a default of 30 days).

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Today, these types of view-through conversions are attributed back to the last impression that was served to a user (whoever bought that ad/served that ad/owns the site it served on gets credit), so it is very possible and common for impressions that the user never saw to get credit. This type of VTC processing is sub-optimal because advertisers and publishers are making decisions based on conversion data that is not based on what users actually viewed. VTCs attributed in this manner can also generate mistrust for these types of conversions and misaligned incentives between advertisers and publishers.

An improved method of conversion attribution called Viewable View Through Conversion (vVTC) is introduced in this publication. The vVTC is a way to attribute view-through conversion events back to the impressions that most deserve credit for them: impressions that are viewable. Attribution systems usually look at the chain of ad impressions that were served to a user, align them based on when they happened, and then point the credit back to the last impression in the chain. However, when calculating attribution, a vVTC attribution system may look only at the impressions that were viewable, rather than looking at the chain of all served impressions to find the last one that occurred regardless of viewability. Because the vVTC attribution method eliminates assigning attribution to unviewable impressions, the vVTC attribution systems can solve the problem of credit going back to unviewable impressions and align advertiser and publisher incentives for users to see the ads.

To understand vVTC, we should first define viewability. In general, an ad may be considered viewable when at least a threshold amount of the ad is visible in a viewport for at least a threshold amount of time. In some implementations, viewability may be defined according to the standard adopted by the Media Rating Council (MRC) to determine whether an ad can be considered as viewed. By the current MRC definition, viewability is established when 50% of the pixels are in the viewport for one continuous second. Some issues that can affect viewability measurements are network issues, unmeasurablity, and ineligibility. Unmeasurability is when the system cannot determine viewability due to a technical reason. Ineligibility occurs with inventory that we cannot currently serve on, not necessarily due to technical reasons. One illustrative example of this, in some implementations, is video.

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In some implementations, a conversion is attributed to the most recent viewed ad in a previous time period (e.g., the last 30 days) if there was no click in that time period. A vVTC attribution system may measure every impression for viewability, which can be difficult to do on a wide basis. Thus, in some implementations, a vVTC attribution system includes both an attribution system and a viewability measurement system. In some implementations, the vVTC method may not rely on other signals, such as user intent actions, user fingerprinting, third-party data to try to build up the validity of the conversion, projections of viewability (i.e., multiplying total conversion counts by a viewability ratio), or the like.

FIG. 1 is a flow diagram of a vVTC process according to an illustrative implementation. In some implementations, vVTC systems may reuse a current VTC infrastructure and add additional viewability data so that the vVTC attribution system has the information to make desired attribution based on viewability. When a conversion tracked impression is logged, the impression is written to a database. The vVTC attribution system measures a viewability of the impression and assigns a viewability status to the impression. The viewability status associated with the impression is stored in the database. Thus, each impression in the database is associated with a corresponding viewability status. When a conversion is read, the vVTC attribution system is configured to check whether a click occurred during a predetermined time period (e.g., 1 to 30 days). If a click occurred during that time period, the vVTC attribution system may attribute the conversion to the detected click. If there is no click detected during that time period, the vVTC attribution system may search within all the impressions for those have a viewable status in the database and attribute the conversion to the most recent viewable impression.
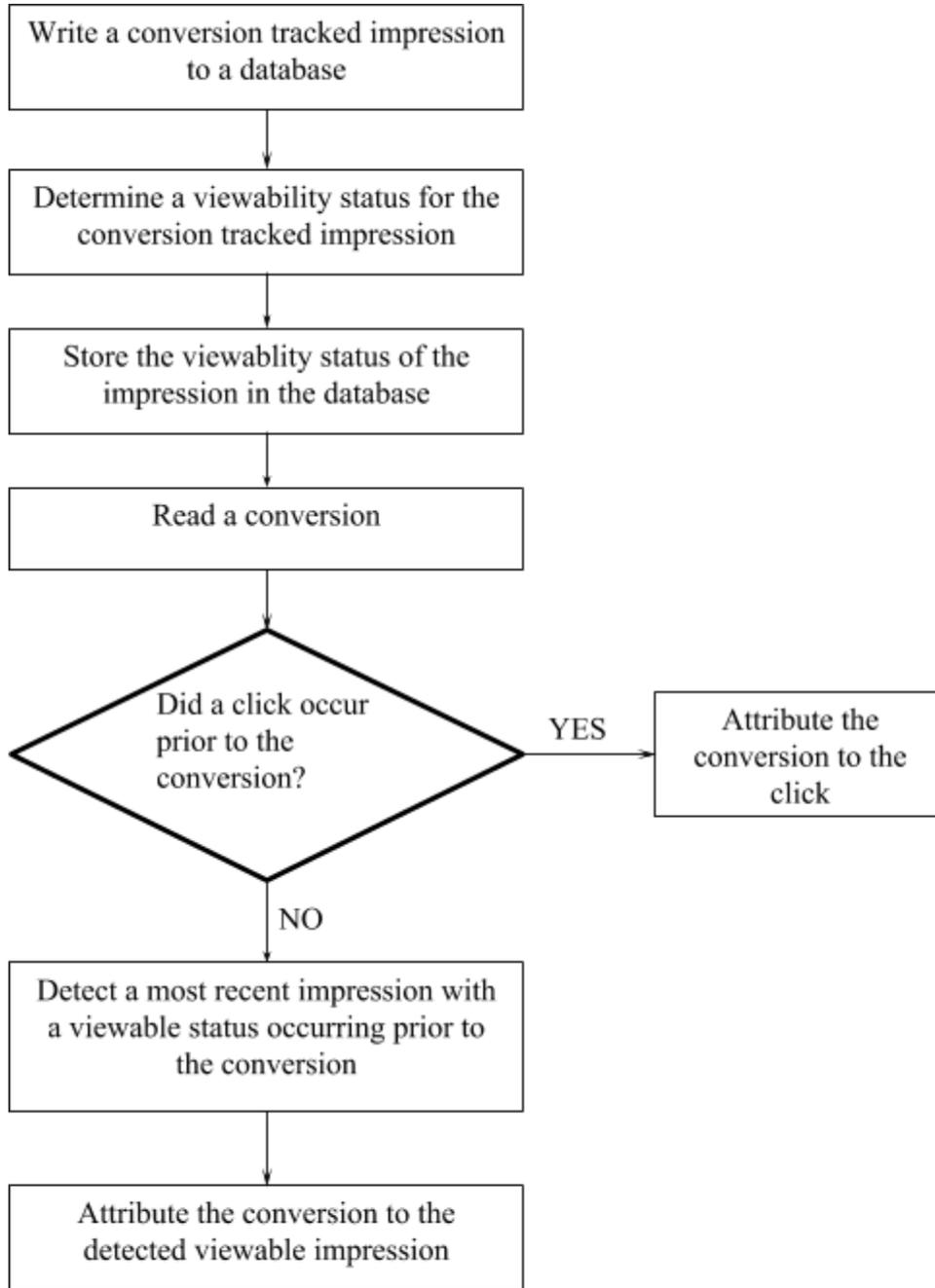
FIG. 1

In some implementations, the vVTC attribution system includes a viewability measurement system configured to measure viewability for each impression written in the database and assign at least one of a plurality of viewability statuses indicating the determined

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viewability to each impression. The plurality of viewability statuses may include, for example, a viewable status, unmeasurable status, ineligible/non-enabled status, and/or other statuses. A viewable status is assigned to an impression when an indication is received that the impression is measured as viewable. An unmeasurable status is assigned to an impression when an indication is received that the impression is unmeasurable for various reasons, such as technical issues (e.g., cross-domain inline frames). An ineligible status is assigned to an impression when an indication is received that the impression (e.g., video) cannot be measured or served by the viewability measurement system.

The vVTC attribution system may be configured to assign different priority levels to each viewability status. For example, the impressions with viewable status may be assigned to a higher priority level than those with unmeasurable or ineligible status. When a conversion occurs, the vVTC system will look for only the impressions with higher priority levels in the database and attribute the conversion to the most recent impression with higher priority levels in the database. In some implementations, the vVTC attribution system may add storage space (e.g., one or more columns) in the database for storing the viewability data associated with each impression stored in the database.

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ABSTRACT

Viewable View Through Conversion (vVTC) are introduced in this publication. vVTC is a way to attribute view-through conversion events back to the impressions that deserve credit for them. vVTC may measure viewability for each impression and attribute conversions to impressions based in part on the measured viewability of each impression. In some implementations, vVTC considers only viewable impressions for attribution.

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