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# Enabling User Control Over Advertisement Delivery

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**ABSTRACT**

Content such as television, online video/audio, podcasts, etc. includes commercial breaks during which advertisements are delivered to the viewer. Measuring viewer response to the advertisement can be affected by the time at which the advertisement is delivered and the level of user interest in the content at that time. This disclosure describes a mechanism to enable users to postpone advertisement delivery. The postponed advertisements are queued and delivered at a later time of the viewer's choice. Optionally, the viewer can also select the mode of delivery of the advertisement. Enabling such user control over the delivery of advertisements can provide an improved user experience and measurement of advertising effectiveness that is relatively free of bias.

**KEYWORDS**

- Advertisement delivery
- Commercial break
- Promotional message
- Streaming content
- Advertisement queueing
- Viewer engagement

**BACKGROUND**

Advertisement delivery for television and other visual/audio programming is usually performed during a commercial break, a timeslot dedicated for advertising. Commercial breaks are often strategically timed. The timing of commercial breaks is selected such that the commercial falls during a segment of the program that is likely of high interest to the viewer.

Advertisers benefit from such selection, with the presumption that the interest in the programming is likely to translate into interest in the advertisement, e.g., due to inertia in switching the cognitive focus. Measuring the degree of engagement or success of the advertisement delivery in this context can be difficult. This is in part due to the bias carried from the viewer's interest in the programming, or because the timing of actual advertisement that is delivered may be interrupting the viewer experience and as a result end up being frustrating to the viewer.

In some locations, commercial breaks in content are restricted to specific time slots, e.g., strictly at the beginning of the programming, or at another time. The viewer can then view the programming relatively uninterrupted, since the commercial breaks are known a priori. In such a case, measuring the degree of engagement with the advertisement can be performed using a dedicated measurement device or by self-reports submitted by viewers. Such measurement is expected to be bias-free. However, such restriction of delivering commercial messages is no longer in use for various reasons.

Some online video websites deliver videos with predetermined commercial breaks and allow the viewers to skip the advertisement after a threshold amount of time. This form of delivery allows measurement of the level of engagement, e.g., "skip" being interpreted as "not interested" and watching the complete advertisement being interpreted as "possibly highly interested" with other levels of interest for partial views of the advertisement.

**DESCRIPTION**

This disclosure describes a mechanism to control when (and optionally, how) an advertisement is delivered to a viewer. The described mechanism enables a viewer to control the time at which advertisements are delivered, and optionally, how advertisements are delivered.

This approach is grounded in the fact that, when a viewer is truly engaged in the programing content, the advertisement may either be a frustrating experience resulting in a "negative" bias towards the advertisement such that an advertisement that could have otherwise engaged the user may be refused or judged of no interest, due to negative reaction, or it may be judged to be of interest to the user due to a "positive" bias towards the program context in which the advertisement is delivered.

The mechanism enables a viewer to throttle or otherwise control when (and optionally, how) an advertisement is delivered. With the use of such a mechanism, viewers are more likely to be bias free, which can enable a more accurate estimation of the viewer's level of engagement with the advertisement. The mechanism enables measuring the effectiveness and the degree of engagement with an advertisement or a promotional message. It is also applicable in other areas where there is a need to evaluate viewer attention and focus.
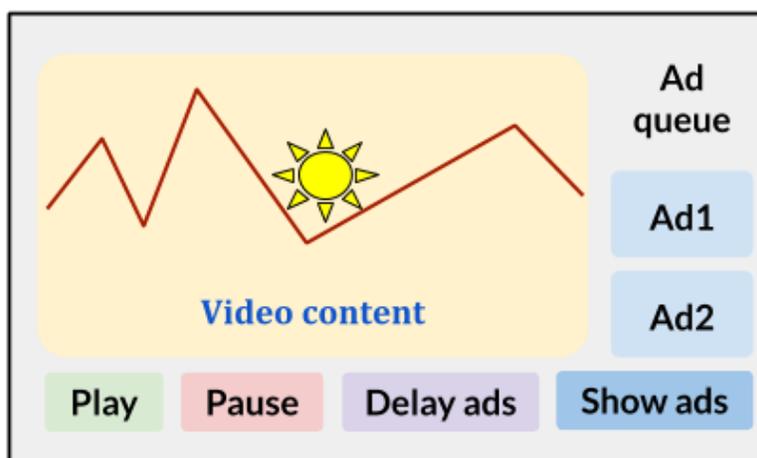


**Fig. 1: User interface to delay advertisement playback**

Fig. 1 shows an example user interface that enables viewers to delay advertisements and play the delayed advertisements at a later time. As seen in Fig. 1, the viewer can choose to delay advertisements ("Delay ads"), which are then added to an ad queue. An option ("Show ads") is

provided for the user to start playback of the delayed advertisements at a later time. The following example illustrates the mechanism:

- When providing a visual or audio stream, such as television, on-demand video playback (e.g., via smartphones, tablets, smart appliances, etc.), podcasts, etc. advertisements are included in the content. The viewer is provided with options to delay the delivery of the advertisement for a period of time. As a result, a queue of "advertisements still to be viewed" is formed for advertisements that are to be delivered at a later time.

- Viewers are provided with options to speed up the advertisement delivery for a period of time. When the viewer selects such an option, advertisements from the queue are displayed. For example, the viewer can choose to view advertisements during a less interesting or less important part of the programming.

- The content stream can be configured to initiate a commercial break. Upon such initiation, the viewer can direct the advertisement delivery system to switch to a different mode of delivery, such as a text banner, picture-in-picture, picture overlay etc. for a given advertisement. In response, the advertisement is delivered in the corresponding mode, thus effectively altering how the advertisement is delivered. When the user chooses a delivery mode that enables simultaneous content playback, the advertisement and the content can both be delivered at the same time.

- The viewer can select to throttle advertisement delivery via a suitable input mechanism. For example, the viewer can provide spoken input, select options via a dedicated control device such as a remote control, provide input via a paired smartphone or smart device, etc.

The described mechanism does not restrict the duration of the advertisement. Rather, it enables viewers to have full control of when (and how) they receive the entire advertisement. In this case, the normal techniques of estimating engagement using a dedicated measurement appliance, are possible and such estimation is bias-free.

The described mechanisms can be provided and utilized via devices that are designed to detect effectiveness of delivered advertisement or other programming, or audio/video/haptic or other information streams. Such devices can include television meters, apps for mobile and/or wearable devices, or as auxiliary features or accessories of smart devices such as smart speakers, smart displays, and other smart appliances.

**CONCLUSION**

Content such as television, online video/audio, podcasts, etc. includes commercial breaks during which advertisements are delivered to the viewer. Measuring viewer response to the advertisement can be affected by the time at which the advertisement is delivered and the level of user interest in the content at that time. This disclosure describes a mechanism to enable users to postpone advertisement delivery. The postponed advertisements are queued and delivered at a later time of the viewer's choice. Optionally, the viewer can also select the mode of delivery of the advertisement. Enabling such user control over the delivery of advertisements can provide an improved user experience and measurement of advertising effectiveness that is relatively free of bias.

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