ON THE EFFECTIVENESS OF VIDEO ADS: A MEASUREMENT STUDY

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Joint work with S.Shunmuga Krishnan
To be presented at the ACM Internet Measurement Conference (IMC), October 2013
Why Study Video Ads?

Ads: A primary way for monetizing video content.

Our goal: Scientific understanding of how effective ads are and how video viewers engage with ads.
How we measure ad effectiveness?

**Ad Completion Rate** = Percent of ads watched to completion by the user *without* abandoning in the middle.

Simple, widely-used metric based on the tenet…

“You have to *watch* the message to *get* the message…”

Caveat: Metrics for ad effectiveness other than completions exist but not studied here.
Some factors that *could* impact an ad’s effectiveness

To study the impact of one factor in isolation and control for other confounding factors, we use a novel technique from the social sciences called quasi-experimental design.
Our Data
Globally-deployed Akamai plugin that runs inside the media player and reports anonymized video and ad metrics via ``beacons” from millions of actual end-users around the world.
Data Characteristics

One of the largest *scientific* studies of video ads.

We analyzed data from users in all continents who watched videos and ads over 15 days in April 2013.

• 65 million unique users
• 33 video providers and ~3000 publishers
• 367 million video views and 257 million ad views
• 75 million minutes of ads in 777 million minutes of videos
• All major video genres (news, sports, entertainment, movies, TV episodes, etc)
Our Findings
True or False:
Viewers are more likely to complete an ad inserted in the *middle* of a video when they are presumably more engaged with the content, than when the ad is inserted in the *beginning* or the *end*.
True.

Of all other factors, ad position had the single largest impact on completion rate. Midrolls had higher completions than pre-rolls or post-rolls.

More importantly, the trend held up even after controlling for other confounding factors such as ad length and the video itself where the ad was inserted.
True or False:
Viewers who repeatedly come to a site are more likely to complete ads since they are (presumably) more interested in that site’s video content.
True.

Repeat visitors to a site had a higher ad completion rates than one-time\textsuperscript{1} visitors in every ad category.

\textsuperscript{1}A one-time visitors made exactly one visit to a site to play videos but never returned to the same site again in our 15-day period of measurement.
True or False:

Viewers are more likely to complete an ad inserted into a longer video such as a movie than a shorter video such as a news clip, since they likely perceive longer videos as more worth waiting for.
True.
Ads inserted into long-form video had significantly higher completion rate than ads in short-form video.

But, after controlling for other factors such as ad position (e.g., longer videos are more likely to have mid-rolls), the impact of video length in isolation was smaller (~4% rather than the original 20% difference in completion rate between long and short).
True or False:
Viewers are *significantly more likely* to complete an ad during evening hours or the weekend when they are more relaxed than during busy work hours.
False.
We saw small but not significant variations in ad completion rates due to the viewer’s time-of-day or weekday/weekend.
True or False:
Viewers are more likely to complete a shorter ad than a longer one, presumably since they run out of patience over time and abandon.
In a controlled quasi-experiment, we compared two similar viewers\(^1\) watching the same video but two different ads of different lengths inserted into in the same position within the video.

The viewer who watched the shorter ad completed more often\(^2\) than the similar viewer who watched the longer ad!

\(^1\)Similar viewers live in the same geography and are watching on devices with similar connectivity. About 160,000 random pairs of similar viewers were used in the quasi-experiment.

\(^2\)Difference in completion rate of 15-second ads and 20-second ads was 3%. Difference between 20-second ad and 30-second ad was 4%
Ad Completion Rate in Different Continents
North America had the highest ad completion rates and Europe the least.
Abandonment Behavior:
Viewers are more patient with ads than with performance issues

Two groups of users: One set waiting for a video to startup since the video is still buffering. The other is watching a pre-roll ad while waiting for the video to begin.

First group abandoned more than three times faster than second group.

By the 10-second mark: More than 45% of viewers have abandoned a slow-loading video. Only 13% have abandoned the pre-roll ad.
Viewers are more patient with ads than with performance issues

Reason: Viewer psychology

Startup delays: Unexpected waits with no clear end in sight, leading to more frustration.

Ad delays: Viewers accept ads as an implicit form of payment for the content. So, the wait for an ad to complete is as expected and the wait is of a predictable duration. So less frustration.
Now, focusing *only* on the population of abandoners.... The abandoners abandon at a faster rate in the earlier portion of the ad. About $1/3^{rd}$ abandon before the quarter-way mark in the ad. About $2/3^{rd}$ abandon before the half-way mark in the ad.
For more information, see:
