Internet video portals do not control views well

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The majority of video reproduction portals on internet, with the exception of YouTube, have quite unsophisticated systems for controlling fraud in the number of views, and some of them even seem to completely lack such systems, according to research carried out at the Universidad Carlos III de Madrid (UC3M) in conjunction with Imdea Networks, NEC Labs Europe and Polito. Credit: uc3m

Video portals have counters that register the number of views, thus reflecting the success of the piece. This data can have economic implications, since with some online advertising campaigns that use videos, the portals can charge based on the number of registered views. And one of the problems with the fraud that exists in this area is that of "bots", computer programs that replicate the behavior of an Internet user, and which can therefore artificially increase the number of views.

"YouTube has a unique system for detecting fraud that is relatively efficient, but it has some inconsistencies," comments one of the study's authors, Rubén Cuevas, of UC3M's Department of Telematic Engineering. "We discovered a discrepancy in the visit counts on YouTube. Specifically, it seems that there are visits that YouTube detects as fraudulent and, therefore, subtracts from the public views counter (the one that appears near the video), but at the same time Google charges the advertiser for them," states Cuevas.

"We've developed a more detailed study of YouTube's system for detecting false visits which, based on our results, is the most sophisticated one in existence," he explains. The method the researchers used allowed them to play the role of all of the different agents involved in the fraud: the attacker, the poster of the video and the advertiser who pays to put ads in the videos. "This allowed us to put our ads into videos that we posted on YouTube, and on which we carried out a fraudulent attack. That way, we could have a complete vision of the view count and of how those views were charged to the advertiser," explains Cuevas. With this method, when they sent "bots" to view two videos (exactly 150 times) YouTube's public view counter only identified 25 views as real. However, Adwords, Google's main service for advertisers, charged the researchers for 91 of the views carried out by the "bots".

The results of this study, which were presented at the World Wide Web Conference (WWW 2016) held from the 11th to the 15th of April in

Montreal (Canada), are explained in detail in the article "Entender la detección del fraude de visitas falsas en portales de contenido en video" (Understanding the detection of fake view fraud in Video Content Portals) which was published in the scientific archive *Arxiv*, in addition to appearing in the acts of the WWW2016. "Google has been in contact with us, expressing their interest in our research, but not voicing any objection to the results we obtained, which we take to mean that they are relevant," explains Professor Cuevas.

In the medium term, these researchers hope to create an auditing system that enables the detection of this type of fraud and "makes this type of business, which is quite opaque, more transparent," they comment. Such a system would increase advertisers trust and, thus, encourage them to invest more money in advertising, they conclude.

More information: *Arxiv*, arxiv.org/abs/1507.08874

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