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Rewarded tasks for reducing ad fraud

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ABSTRACT

Ad fraud occurs when unscrupulous web or app publishers generate clicks, ad-impressions, or other events using bots that emulate human visitors to the web-page, app, or ads within. Ad fraud improperly diverts significant amounts of revenue to such publishers. Ad networks have long grappled with controlling or eliminating ad fraud.

This disclosure uses rewarded ads to issue challenges to willing users so as to discriminate between bots and humans. Users that are determined to be bots are tracked, ads appearing on associated web-pages or apps discarded, and such publishers noted for further action. The techniques enable detection of fraud using an API-approach, e.g., inside the ad, such that the use of a software development kit (SDK) for collecting ad-spam signals is lessened.

KEYWORDS

Ad fraud, rewarded ads, captcha-ads, fraud detection, click fraud

BACKGROUND

Ad fraud occurs when unscrupulous web or app publishers generate clicks, conversions, ad-impressions, traffic, or other data events using bots that mimic human visitors to the web-page, app, or ads within. Ad fraud improperly diverts significant amounts of revenue to such publishers. Ad networks have long grappled with controlling or eliminating ad fraud.

DESCRIPTION

This disclosure uses rewarded ads to issue challenges to willing users so as to discriminate between bots and humans. Rewarded ads are an ad format that gives users the option to watch an ad in exchange for a reward, e.g., in-game or in-app points. Because the choice of watching the ad rests with the users, they don’t have to watch ads they’re not interested in, and the ads they do see, e.g. video ads, are presented in full. Rewarded ads enable publishers to build ad monetization into the mechanics of their apps or games, and improve user engagement with both app and in-app ads.

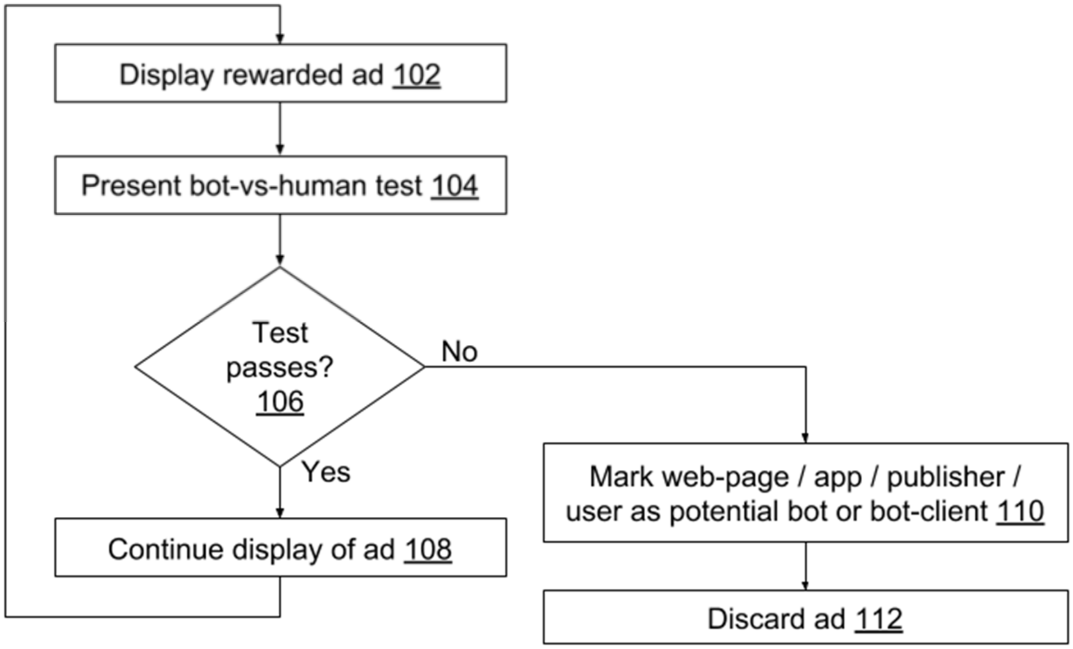
Display rewarded ad 102
Present bot-vs-human test 104
Test passes? 106
No
Yes
Mark web-page / app / publisher / user as potential bot or bot-client 110
Continue display of ad 108
Discard ad 112

Fig. 1: Rewarded ads to detect ad fraud

Fig. 1 illustrates the use of rewarded ads to detect ad fraud, per techniques of this disclosure. A rewarded ad is displayed to the user (102), and if the user accepts the ad, the user is presented with a bot-vs-human test. Such a test can be a task that would be difficult or impossible for a bot or emulator to do, e.g., rotate the mobile device; sum up two numbers; check a box that says “I’m not a robot”; choose from a list of images one that is described in text or audio; etc. The bot-vs-human test may be thought of as being similar to a captcha within an ad.

If the test passes (106), e.g., the user is confirmed as being human, the reward is granted, and the ad continues to be displayed (108). The process repeats.

If the test fails (106), then such non-complying users are marked as potential bots, and their apps or publishers / developers marked as potential bot-clients. The ad is discarded, and the reward associated with the ad is not granted. Such users and publishers, suspected to be bots or bot-clients, are tracked across apps to see if they are not able to comply in other apps. Action may be taken against such apps or web-pages and their publishers or developers if evidence mounts of their continued bot usage to commit fraud.

Different mechanisms are employed across different apps to assure that the requested task is appropriate for particular legitimate users to perform. The techniques of this disclosure apply to interstitial ads, native ads, banner ads, instream ads, etc. The techniques also allow background ads to be identified as such, since no action is performed on the ad because a user is generally unable perform the requested task on them.

Although rewarded ads are typically implemented using a software development kit (SDK) to collect ad-spam signals, the techniques of this disclosure enable fraud detection using an API-approach, e.g., inside the ad, which is an apposite approach for many markets.

CONCLUSION

This disclosure uses rewarded ads to issue challenges to willing users so as to discriminate between bots and humans. Users that are determined to be bots are tracked, ads appearing on associated web-pages or apps discarded, and such publishers noted for further action. The techniques enable detection of fraud using an API-approach, e.g., inside the ad, such that the use of a software development kit (SDK) for collecting ad-spam signals is lessened.