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# A System And Method For User Customized 3d Model Placement

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# A SYSTEM AND METHOD FOR USER CUSTOMIZED 3D MODEL PLACEMENT

## ABSTRACT

A system and method are disclosed that enable user-customized 3D ad model placement in augmented reality videos. The first part of the algorithm involves adding markers into the video created by the video providers. The system for broadcasting the video includes an algorithm to predict the products the user is likely to purchase, thus customizing advertisement placement. A 3D model is generated for the product identified by the prediction algorithm. The system combines the product generated via the prediction program with the markers on the video to generate the placement. Thus a video is displayed on the user's device with an ad for the product customized for the user. This enables the user to click on the product for information or purchase and increases the chances of the user purchasing the product. The disclosed method of model placement has high reliability, user specificity and cost effectiveness in advertising.

## BACKGROUND

Currently, advertisements based on augmented reality (AR) or virtual reality are available. However, user customized 3D product placement is unavailable. Hence, there is a need for advertising products on VR Video that is customized for the person watching the video.

## DESCRIPTION

A system and method are disclosed that places user-customized 3D model advertisements in augmented reality videos. The system includes a user interacting with a cloud-based server, which supports virtual or augmented reality. The method includes a 3D customized object placement for the purpose of advertisement. The algorithm detects the product to be advertised which is customized to the user, as shown in FIG. 1. Video producers produce a video. In order to advertise a product specific to a user in the video, the video developers introduce markers on

their videos. These markers are stickers prepared with QR codes to provide contextual

information for the placement of the marker. The video producers add these markers during post-

production of the video. As shown in the FIG. 1, when the video plays, the system recognizes

these markers, and combines the information provided by the markers with an algorithm

predicting the user's interest. The algorithm provided information includes customized product

information or information on a product the user desires to buy. The system then places a 3D

model of the product into the video or virtual world. The user being interested in the product

clicks on the 3D model. The product advertiser pays the video producer for every click by the
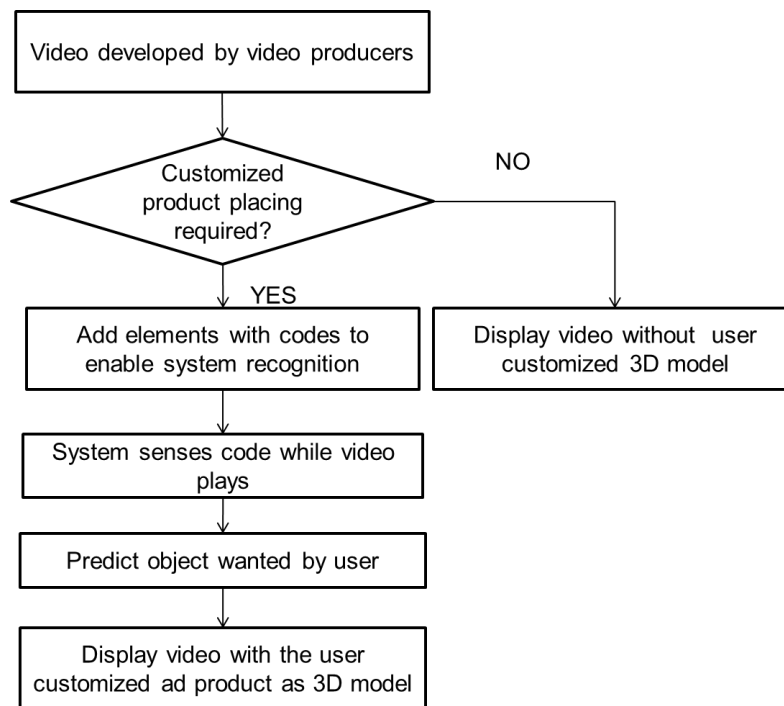
user watching the video.



FIG. 1: The method to enable user customized 3D model placement

Placement of markers could also be done by placing marks invisible to the naked eye,

such as by providing metadata with the video.

In one example, to advertise a food product, a video with a scene happening at a kitchen

is played, and on the counter we see a box of the user's favorite cereal, placed there by the system. This prompts the user to click on the 3D product which is placed for the purpose of advertisement, and may enable the user to buy the product. In another example, to advertise a vehicle liked by the user, a video with a scene happening on a busy street is played, and on the background we may see a car parked, of the model and make that the user just looked for while shopping for a new car.

Customized 3D product placement in videos is a new area and this creates a new way of advertisement for the VR/AR universe, tailoring a customized experience for the user. This method and system have high reliability, user specificity, less cost. The cost of the advertisement is estimated as cost per click.