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## **Attribution to ad campaigns of user interaction with product demo units**

### **ABSTRACT**

Online advertisers, such as brick-and-mortar retail advertisers, or consumer product brands that sell through such retailers face a challenge in attributing consumer actions, such as visiting a store, to advertising campaigns. The techniques of this disclosure make advantageous use of product demo mode of products displayed in-store to transmit a signal that boosts visit detection. The solution is robust to products being moved around a store or removed from display, since the product itself broadcasts the signal. The techniques also utilize the ability of a product to establish facts about its surroundings that enable richer reporting on store visits.

### **KEYWORDS**

- Online advertising
- Store visit
- Demo mode
- Product demo

### **BACKGROUND**

Brick-and-mortar retail advertisers, or brands that have products that sell through such advertisers, face a challenge in attributing consumer actions such as visiting a store, trying out a product, etc. with online advertising campaigns. Some online advertising products use user location data and link it to ad clicks to help advertisers understand the impact of online ad spending on user visits to particular stores.

Current technologies for linking user visits in physical stores to ad clicks for specific products require significant setup expense. For example, such expense is incurred, e.g., to perform Wi-Fi surveys of stores, to deploy Bluetooth beacons and to manage associated data,

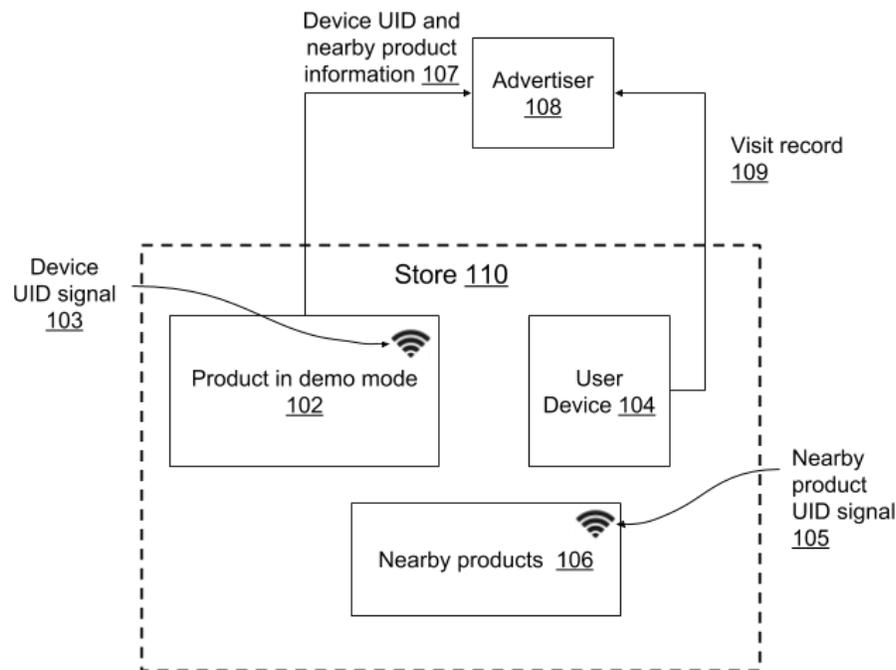
etc. to ensure that location detection is reliable. When products are moved around in physical stores, the location data becomes stagnant, which can lead to additional expense.

Some high value advertisers that use online advertising to drive store visits include brands that sell consumer electronics products, e.g., televisions, phones, smart home appliances, and other white goods. In many physical stores, such products are displayed in a demonstration mode.

### DESCRIPTION

High value products, such as consumer electronics, are set up in a demonstration mode, e.g., as product demo units, for users to try during a store visit. The techniques of this disclosure make advantageous use of the demonstration mode of a product displayed in-store to improve the attribution of store visits to online advertising.

The present techniques configure consumer products that are in the demo mode in a physical store to broadcast a pre-assigned beacon signal. For example, the signal can be Bluetooth beacon transmissions that use standard custom or beacon formats. Consumer electronic devices, smart home devices, appliances, etc. often include hardware capabilities, e.g., Bluetooth, that enables such devices to transmit such a signal. Per techniques of this disclosure, the signal from each such in-store product includes a unique ID (“UID”) associated with the product.



**Fig. 1: Attribution of product demos**

Fig. 1 illustrates an example scenario that illustrates a store with products in demo mode, and the use of beacons. A product in demo mode (102) of a product installed in a store (110) is configured to broadcast a device UID signal (103). Nearby products (106), e.g., other products in demo mode, are also configured to broadcast a specific pre-assigned signal (105) that includes a UID. Some nearby products may not be configured to transmit UID, but may transmit other types of signals. The product in demo mode (102) is configured to detect signals from nearby device(s) (106).

If the product in demo mode (102) is an internet-connected device, it provides information (107) including its UID and information about its environment, e.g., location, nearby products (e.g., corresponding UIDs) from the same brand or other products, etc. to advertiser (108). For example, the product in demo mode can perform a network scan, e.g., Wi-Fi scan and determine its location. Alternatively, it can send the data to the advertiser, for remote

determination of location. The advertiser can associate such information with the UID assigned to the demo unit.

When a user, carrying a user device (104), e.g., a smartphone, visits the store, the user device scans for signals in the vicinity, and detects signals from products in the store, e.g., signals 103 and 105 respectively, from product in demo mode (102) and nearby products (106). The user device generates a visit record. The visit record tags the visit to the particular store, and product UID. With user permission and express consent, user device (104) can provide this information (109) to the advertiser.

The advertiser can use the information from the product, e.g., to optimize advertising spend for campaigns that drive customers to stores and products that are displayed in an optimal manner, e.g., away from other brands, in particular stores, etc. The advertiser assigns UIDs to products in a manner that particular UIDs correspond to particular products that are advertised. When users permit, the advertiser can match visit records to advertising campaigns.

The techniques of this disclosure make advantageous use of product demo mode to transmit a signal that boosts visit detection. Since demo mode is commonly used in stores, little to no effort from the retailer is necessary. Thus, detection of location signal is easier than with the use of current solutions such as dedicated in-store beacons. The solution is robust to products being moved around a store or removed from display, since the product itself broadcasts the signal. For products that do not include beacon transmission capability, a discrete beacon can be attached to the product. Further, the techniques utilize the ability of a product to establish facts about its surroundings that enable richer reporting on store visits.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may

enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

## CONCLUSION

The techniques of this disclosure make advantageous use of product demo mode of products displayed in-store to transmit a signal that boosts visit detection. The solution is robust to products being moved around a store or removed from display, since the product itself broadcasts the signal. The techniques also utilize the ability of a product to establish facts about its surroundings that enable richer reporting on store visits.