THE EFFECT OF LOCATION ON PERCEIVED AD INTRUSIVENESS OF MOBILE ADS

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ABSTRACT

While ads have potential benefits for both marketeers (revenue) and users (monetary, informational, etc.) they also have shortcomings such as being perceived as intrusive. With the advent of mobile computing location based services might be able to address the shortcomings of ads. In this paper we present initial evidence that location has a significant impact on the way people perceive ad intrusiveness.

HYPOTHESIS

The aim of this study is to research the effect of receiving an ad which presents a product which is related to the user's location (location-fit). Based on the literature we assume that a person's location plays an important role in a person's cognition and therefore ads that take location into account will interfere less with the cognitive processes [1]. From this we derive the following hypothesis:

Location-fit ads will be perceived as less intrusive compared to location-misfit ads.

MOTIVATION

- Improve effectiveness of Location Based Advertising (LBA). Since perceived ad intrusiveness is an important predictor of ad avoidance[1], studying the effect of LBA on perceived intrusiveness will give insight in the effectiviness of LBA.
- Improve the user experience of mobile advertising and advertising in general.
- Extend the research on Location Based Advertising: there is little in situ research on the effectiveness of LBA.
- Develop a novel method of researching the user experience of mobile applications.
- Researching the user experience of LBA could benefit the development of other Location

WHY A VIRTUAL REALITY EXPERIMENT

1. Due to the mobile nature of pervasive computing devices the context changes constantly [2,3]...

Figure 1.

2. Consequently, the possibility to directly measure and control is compromised by an unstable setting with many intervening variables [2,3].

Figure 2.

3. The CAVE-setup offers us a controlable and measurable research setting while offering the participant a realistic environment to interact with.

Figure 3.

METHODOLOGY

- The experiment was conducted in a virtual supermarket simulated in a CAVE-setup (figure 3): a simulated 3D supermarket is projected on 4 rear-projection screens. Participants can move in the virtual setting with the help of a head-tracking device (figure 4, 5)
- Between subjects design: participants were randomly assigned to two groups: location-fit and location-misfit group.
- Location-fit: The mobile ad with product X was presented when the participant was in proximity of product X (figure 4). Location-misfit: The mobile ad with product X was presented when the participant was in proximity of product Y (figure 5). Product X was chewing gum, product Y was soup. Proximity was set to 2 meters distance from the product.

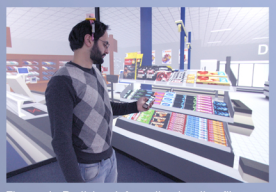

Figure 4. Participant from the location-fit group receives mobile ad at the counter shelf (reenacted)

Figure 5. Participant from the location-misfit group receives mobile ad at the soup shelf (reenacted)

Figure 6. Mobile ad for chewing gum

- The mobile ad advertised chewing gum on a smartphone (figure 6). The ad was triggered automatically when the participant entered the fit- (counter shelf with chewing gum) or misfit-trigger area (soup shelf), depending on which group the partcipant belonged to.
- 12 participants were analyzed: 8 participants who witnessed the location-misfit ad (4 males and 4 females; average age 23) and 4 who witnessed the location-fit (2 males and 2 females; average age 21).
- Participants had to buy groceries based on a shopping list we provided. This shopping scenario ensured that all participants had a similar shopping experience and moreover visited the preset trigger areas in order to receive the mobile ad.
- After the experiment participants had to fill out the perceived intrusiveness scale (7 items, 7-point scale) [1] with regards to the mobile ad they received.

RESULTS & CONCLUSIONS

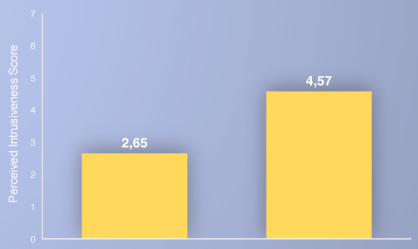

Figure 7. Group scores on the perceived intrusiveness scale

Based on the Mann Withney U test we conducted, we can conclude that the median scores (see figure 3) for both groups on the ad intrusiveness scale differed significantly (z= -2.722 p=0.003). It can be further concluded that (virtual) location based ads lead to less ad intrusiveness than non-(virtual) location based ads.

EXTRA INFO

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