

Engaging Passers-by with Interactive Screens – A Marketing Perspective

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Abstract: This position paper approaches pervasive advertising from a marketing perspective. It provides a short introduction into the shift from an economy of attention to an economy of engagement. In the second part it analyses seminal research on interactive screens and shows how passers-by can actively engage with public displays.

1 From attention to engagement

For a long time, information was considered to be one of the most important resource of the information age but with the spread of digital technology, information is no longer a scarce commodity but became ubiquitous. As Richard A. Lanham puts it: "If economics is about the allocation of resources, then what is the most precious resource in our new information age? Certainly not information, for we are drowning in it. No, what we are short of is the attention to make sense of that information." [1] Thus, for an advertising company, not the spread of information was the main difficulty, but the attention of their customers. The attention economy served as a guiding paradigm for traditional advertisers and e.g. led to the established AIDA model, that is used to describe a basic buying process that includes Attention, Interest, Desire and Action. As attention is the first step in the buying process it plays a very central role in successfully selling products [2].

Today, we see an important shift in consumer behavior. With the advent

of large participatory platforms like Wikipedia, YouTube, and Facebook, usage of the Internet is not limited to passive reception. Passive consumers become actively engaged. Given the growth of user generated content, businesses and advertising in particular explore possible competitive advantages and try to best benefit from the development [3].

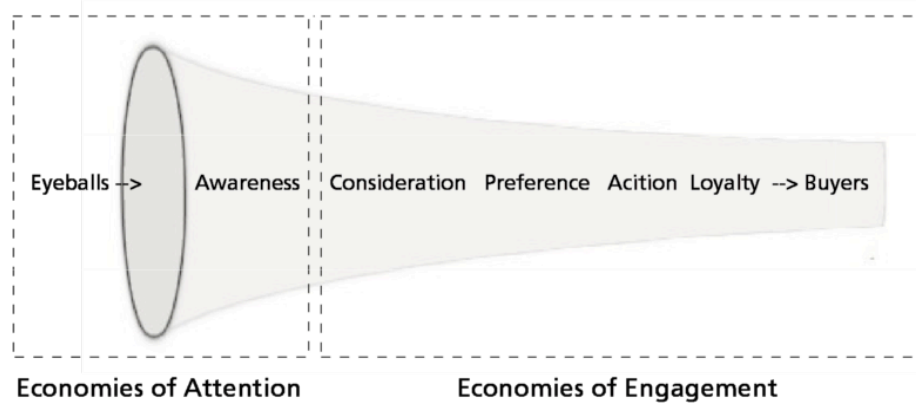


Figure 1: Influence of Attention and Engagement [according to 4]

In their analysis of the altered relation between companies and consumers, Li and Bernoff use the marketing funnel in figure 1 to describe the transition from an economy of attention to an economy of engagement: “In tradition marketing theory, consumers are driven into the big end through awareness activities like advertising. They proceed through stages – including consideration, preference, and action – to become buyers. Marketers have little control over what happens in the middle stages” [4] but the influence of the economy of engagement seems to be the strongest there.

The authors describe active engagement as when customers start to lead the conversation about a product and when they support each other: „With so many products trying to get people’s attention, shouting at them isn’t nearly as effective as it used to be. [...] Marketers no longer dictate the path people take, nor do they lead the dialogue. Once people are aware of you product, a new dynamic kicks in: people are learning from each other. Social technologies have revved up that word-of-mouth dynamic, increasing the influence of regular people while diluting the value of traditional marketing. [...] Costumers in the middle of the funnel are engaged in conversations on blogs, in discussion forums, and in social

networks. Your company can participate in these places, but shouting doesn't work. Conversations do." [4]

To advertise their products, companies still need to get the attention of their customers. But understanding the dynamics of an economy of engagement, marketers should connect attention with engagement. In the process of communication they should first get the attention of their customers and second enable engagement further down the marketing funnel. In enabling engagement they can strengthen the relationship with the consumer and increase their involvement.

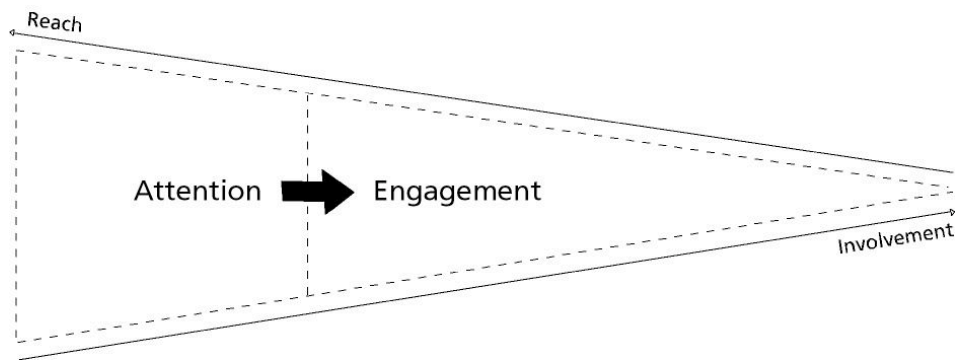


Figure 2: Connecting Attention and Engagement

In the following, this paper will analyze engagement possibilities with interactive screens. While in the past the ability to actively engage with public displays was not an option, this now seems to be changing.

2. Attention and engagement with interactive screens

Initial analysis of public interactive displays has already provided valuable insights the distinction between attention and engagement. While Brignull and Rogers developed a "two-thresholds framework" with peripheral and focused activities, they point out the possibility of engagement that they call direct interaction [5]. Vogel and Balakrishnan differentiate between ambient display, implicit, subtle, and direct interaction. In this "four-phase framework" engagement with the viewer is only possible in the fourth phase that they call the phase of personal interaction [7]. Last but not least, Streitz et al.'s "three-phase framework" differentiates between ambient, notification, and interactive zone. Here,

active engagement is only possible in the latter [6]. To understand how engagement with passers-by can be realized, I will present a short overview of how users are actively engaging in the different frameworks.

2.1. Two-Thresholds Framework

Brignull and Rogers make a distinction between and divide the process of interaction into three general phases. These phases range from perception to direct interaction with the featured content, as shown in figure 1, and include: peripheral awareness activities, focal awareness activities, and direct interaction. Direct interaction activities concern the active engagement with the interaction system: “In this activity space, an individual (or a group acting cooperatively) type in their opinion to the display. In their analysis Brignull and Rogers not only look at these three kinds of activities but also at the transition zones between them. Their analysis revealed that the transition zones between different types of activities represent a key bottleneck in public interaction behavior. [5]

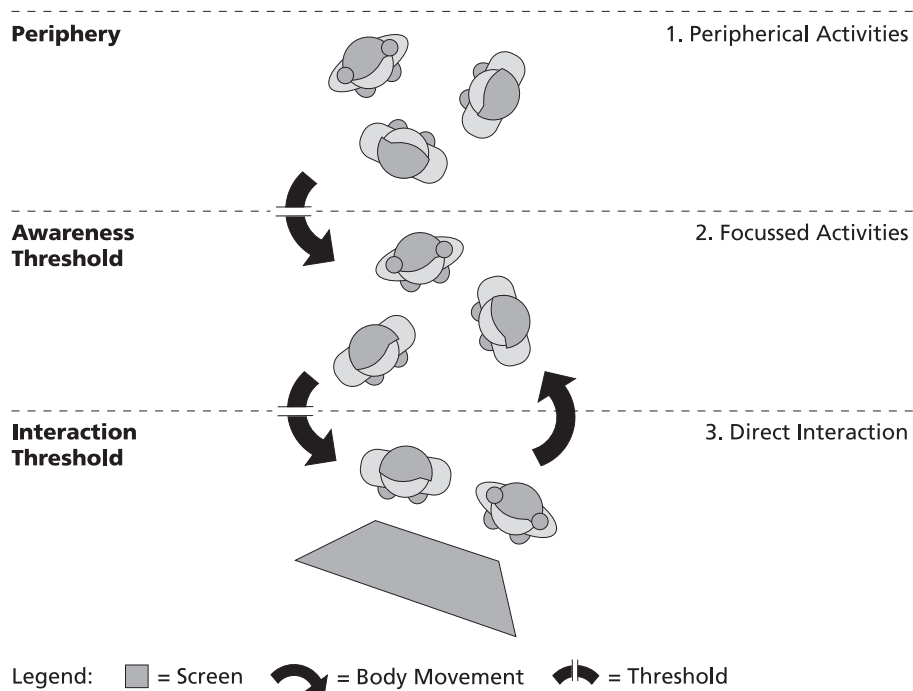


Figure 3: User-engagement through direct interaction [8 according to 5]

2.2. Three-Phase Framework

By dividing the space into ambient, notification, and interactive zones, as Streitz et al.'s "Three-Phase Framework for Interaction Phases" in figure 2 shows, content can be adapted to each phase [6]. Their model focuses on the design of the system from the ambient to the interactive zone, rather than the behavior of the user. As a viewer approaches the surface, or once her presence is registered, interactive content is displayed that can provide personal, detailed information:

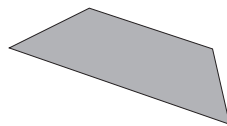
"The third zone is active, once the person is very close to the GossipWall [display]. In this case, the person can approach the GossipWall and interact with each single cell (= independent interactive pixel). This is able to store and communicate information in parallel in combination with mobile devices."

Ambient Zone



Notification Zone

Interactive Zone






Legend:  = Screen  = Body Movement  = Interaction Zone

Figure 4: User-engagement within the interactive zone
[8 according to 6]

As figure 2 illustrates, the Three-Phase Framework focuses on the differentiation between specific zones of interaction. Details about the user's activities are not given.

2.3. Four-Phase Framework

In their "four-phase framework" Vogel and Balakrishnan differentiate between ambient display, implicit, subtle, and direct interaction. The framework differs from Streitz et al.'s three-phase model in that it emphasizes the interaction between the system and the user and the "fluid transitions between phases, and [...] supports sharing by several users each within their own interaction phase". By dividing Streitz et al.'s 'interaction zone' into 'subtle' and 'personal' interaction phases, and by generalizing the notion of a 'notification zone' into an 'implicit' interaction phase, [the] framework suggests a wider range of implicit and explicit interaction techniques." [7]

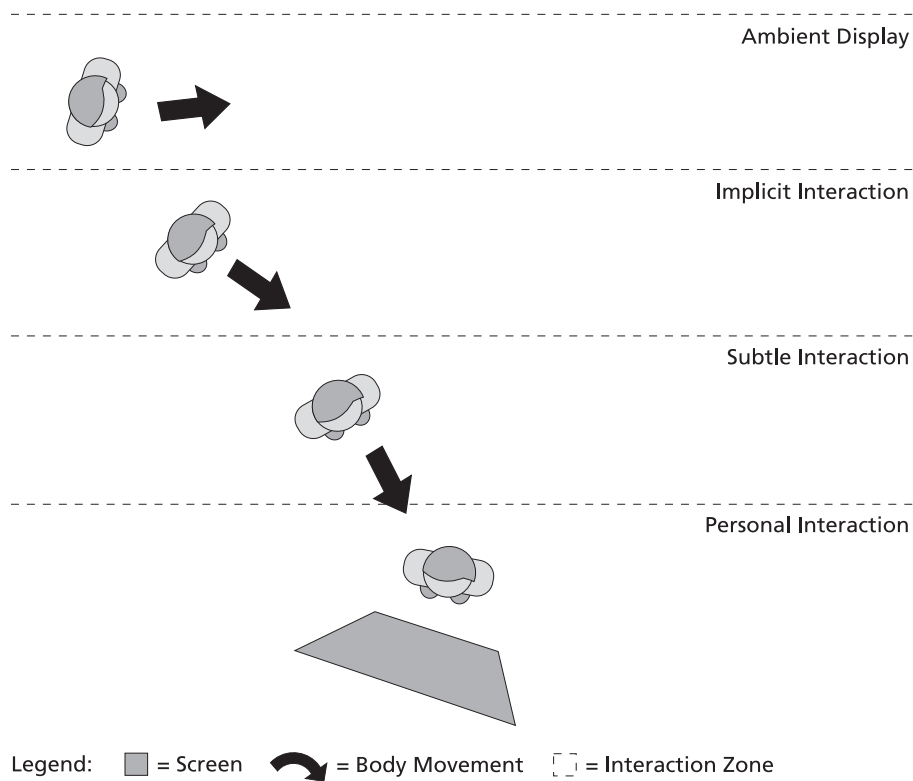


Figure 5: User-engagement through personal interaction [8 acc. to 7]

The framework's four continuous phases cover a range of activities from distant implicit public interaction to personal interaction. It also looks at fluid inter-phase transitions between every phase. The subtle interaction

phase merely provides a description of use behavior. However it does indicate that “to this point, the user has only interacted implicitly.” In the final phase, the user is close to the display. Since she stands close to the surface “the user should be able to move closer to the screen and touch information items for more details, including personal information. [...] Since the user is close to the display, their body can help occlude the view of their personal information from others.”

3. Conclusion

By approaching pervasive advertising from a marketing perspective this paper gave a short overview on the shift from an economy of attention to an economy of engagement. In the second part it presented seminal work that analyzed the process of interaction with public displays to search for user-engagement possibilities within the area of pervasive advertising. The author of this paper hopes that pervasive advertising will not start to shout out loud to get attention of customers, but enable a new way of calm advertising where customers collaborate and freely and quietly engage with public screens based on their current needs.

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