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VR Technology in Advertising Design: Performance and In-depth Application (Postprint)

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Date: 2023-10-08T00:00:00+00:00

Abstract

With the rapid development of advertising technology and its active integration with Internet technology, interactions between consumers and the market have become increasingly frequent. This has given rise to new forms of interactive advertising, such as VR advertising. Under the dual reform of technology and media, this enables advertising enterprises to develop more distinctive creative advertising formats. Therefore, this paper analyzes the representation and in-depth application of VR technology in advertising design, aiming to foster a deeper understanding of VR technology and promote its broader adoption.

Full Text

VR Technology: Performance and In-Depth Application in Advertising Design

ChinaXiv Partner Journal

Abstract: With the rapid development of advertising technology and its active integration with Internet technology, interactions between consumers and the market have become increasingly frequent. This has given rise to VR advertising as a new form of interactive advertising. Under the dual transformation of technology and media, advertising enterprises can create more distinctive creative forms. Therefore, this paper analyzes the performance and in-depth application of VR technology in advertising design, aiming to deepen people's understanding of VR technology and promote its wider adoption.

Keywords: VR technology; advertising design; performance and application

Classification: TP391

Document Code: A

Article ID: 1671-0134(2017)11-066-02

DOI: 10.19483/j.cnki.11-4653/n.2017.11.019

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In advertising activities, the dissemination of advertising information, marketing activities involving consumer feedback, and new market behaviors that influence advertising utilization are collectively referred to as interactive behaviors. VR advertising represents a new form of advertising that employs virtual reality technology to overlay information onto real objects. During advertising dissemination, audiences purposefully participate in advertisements and engage in interactive experiences with VR ads.

1. Characteristics of VR Video Advertising

1.3 Scene Precision Characteristics The integration of advertising with specific scenarios serves the purpose of scenario-based marketing. VR technology enables effective fusion of computer and network technologies. Within the VR-constructed virtual reality environment, users experience what is known as the immersive characteristic—the sensation of being completely placed within the virtual world while interacting with a product, able to perceive everything in that environment. This contact with virtual objects produces an exceptionally realistic sensation. Without exaggeration, VR technology integrated with advertising videos can fully showcase product functions and features, allowing people not merely to view product performance and appearance but to personally experience the product. This enables deeper perception of both product appearance and performance. VR video advertising strives to transform product images into “physical objects,” thereby gaining greater public attention and recognition.

1.2 Stereoscopic Image Characteristics Traditional video advertising provides audiences with planar image information, whereas VR video advertising enables the perception of stereoscopic images. Research shows that stereoscopic image information not only delivers exceptional visual experiences but also maximizes visual communication effectiveness. Visual communication is essentially a process from sensation to thought, jointly realized by the brain and eyes—after observing something, the mind forms associations. Different media forms affect how people perceive, receive, and mentally image things differently. Print media uses pictures and text to describe objects, requiring people to comprehend these elements through their own experience and imagination to reconstruct the original appearance. Electronic media, by contrast, uses images to describe objects, creating intuitive and concrete impressions. With rapid media development, people’s cognition has become more concrete. In daily life, advertising information spreads extensively; broadcast advertising primarily aims for brand recognition to stimulate sales. As broadcast advertising requires media channels, VR video advertising has emerged accordingly.

2. Specific Applications of VR Technology in Advertising Design

2.1 VR Display Advertising in the Real Estate Industry In the increasingly competitive real estate market, traditional display methods struggle to meet consumer demands. By accurately grasping market trends and decisively transforming the latest technological capabilities into core productive forces, real estate enterprises can secure their position and emerge as industry leaders. Network virtual display advertising represents a novel real estate online marketing approach that integrates network, advertising, and animation technologies, gaining significant popularity worldwide. As China's real estate industry continues to thrive, sales remain its central focus. Virtual reality technology serves as a powerful tool for showcasing large-scale projects, constructing realistic three-dimensional dynamic models that comprehensively display both interior and exterior spatial functions. This enables target audiences to participate actively and voluntarily, allowing project strategists' messaging to gain broader recognition and appreciation. Although three-dimensional animation has seen widespread market adoption, its renderings remain static rather than dynamic. Even when 3D animation demonstrates strong dynamic expressiveness, its interactivity is limited, presenting content in a static manner. Viewers can only browse from predetermined angles passively, hindering comprehensive information access. VR technology application empowers target customers to view freely and navigate arbitrarily within the virtual reality system, breaking conventional 3D animation viewing patterns. This delivers unprecedented on-site presence and realism, significantly stimulating purchase desire and accelerating sales growth. Figure 1 [Figure 1: see original paper] demonstrates the practical application of VR technology in real estate advertising.

2.2 VR Display Advertising in the Fashion Industry Currently, most Chinese fashion e-commerce platforms have adopted virtual advertising. Some countries possess more advanced and mature practices in this domain, offering valuable experiences that China can learn from to address its own shortcomings. In the United States, numerous virtual fashion design websites have emerged, leveraging online platforms for customized design that enables customer-designer collaboration. These systems utilize three-dimensional human body models to design two-dimensional clothing patterns, which are then stitched and displayed on virtual models. Fashion network virtual display advertising provides authentic virtual experiences, allowing adjustment of model proportions to approximate the customer's own physique for realistic try-on effects. Online platforms facilitate easy fitting and coordination—considerably simpler than physically changing clothes in brick-and-mortar stores—while delivering more significant visual impact.

2.3 VR Display Advertising in the Home Appliance Industry Virtual display advertising for home appliance products is increasingly common. Many renowned Chinese appliance brands utilize virtual display advertisements; for example, Haier's virtual ad for its drum washing machine enables customers to

view the exterior from all angles, open the drum door, and access accurate product specifications. This information helps customers better comprehend product performance, facilitating informed purchasing decisions. Unlike in-store sales personnel who continuously promote product features, network virtual display advertising empowers customers to independently examine product information and make autonomous purchase decisions.

In summary, integrating VR technology into advertising delivers both impressive visual effects and deeper customer understanding of product performance. As a technology with substantial application value across diverse industries, its significance and utility are self-evident. Consequently, traditional marketing paradigms will inevitably be gradually supplanted by VR technology, and experiential marketing is poised for considerable growth, garnering greater acceptance and recognition.

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