

Application of Dynamic Visual Communication Design in Digital Media



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Abstract: With the rapid development of digital media technology, dynamic visual communication design plays an increasingly important role in modern communication. This paper discusses the basic concept of dynamic visual communication design and its application in advertising, multimedia, film and television, and digital product design, and analyses its importance in enhancing user interaction, information transfer efficiency and visual experience. Then it puts forward the development strategies of diversified interactive experience design, personalised and customised design, multi-sensory fusion design and cross-platform seamless integration design, aiming to provide reference for the further development of dynamic visual communication design in the future. With the advancement of technology, dynamic visual communication design will play a wider role in digital media, promote the development of multi-sensory integration and personalised experience, and bring more immersive interactive experience to users.

Keywords: dynamic visual communication design; digital media; interactive experience; personalised design; multi-sensory integration

Introduction

With the rapid development of information technology, digital media has become an important carrier of modern communication, which drives the change of visual communication design. Dynamic visual communication design breaks the limitations of traditional static design and transforms the planar visual symbols into three-dimensional or multidimensional dynamic expressions. This design form is applied in many fields such as advertisement, film and television, game, etc., which significantly improves users' visual experience and sense of participation. In the era of digital media, the speed and diversity of information dissemination put forward higher requirements for the immediacy and interactivity of design, and dynamic visual design has become an indispensable part of digital media due to its multi-dimensional presentation, rich sensory stimulation and high sense of user participation. Therefore, it is of great practical significance to study the application of dynamic visual communication

design in digital media.

1. The Concept of Dynamic Visual Communication Design

1.1. Definition and characteristics of dynamic visual communication design

Dynamic visual communication design is a design method that conveys information in a multi-dimensional form by combining visual symbols and dynamic elements. Its core is based on movement, change and timeline, so that the design object has mobility and interactivity, and through the integration of images, text, sound effects and other media elements, it is able to convey complex information in a more vivid and figurative way, and to enhance visibility and attractiveness (Ni, 2024). Dynamic visual design can quickly capture the attention of the audience and enhance the communication effect.

The characteristics of dynamic visual communication design are mainly reflected in its four aspects of interactivity, temporality, multisensory and narrative. Firstly, interactivity means that the

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audience can get a more participatory experience through interaction with design elements, which is not only limited to visual changes, but also may involve multi-sensory feedback such as touch and sound. Secondly, temporality is reflected in the fact that the design needs to gradually present information through the passage of time, and the designer can control the rhythm and sequence of information through changes in the timeline, thus improving the audience's understanding and acceptance of the information. Again, multi-sensory is a major feature of dynamic design, through the combination of sound, animation, light effects and other sensory elements, the design work can more comprehensively stimulate the audience's perception, so that the information transfer is more rich and three-dimensional. Finally, narrative is especially prominent in dynamic design, and the designer can weave the information into a smooth narrative by means of coherent visual changes and transitions, so that the audience can be more immersed in the viewing process. Therefore, dynamic visual communication design is not only a form of visual art, but also a kind of communication mode that can influence the audience's perception through multi-dimension and deep level.

1.2. The difference between dynamic visual communication design and traditional static visual design

Compared with traditional static visual design, the biggest difference between dynamic visual communication design is its presentation form and information transmission method. Static design relies on fixed plane graphics, colours and typography, and the audience can only receive the information in a moment, while dynamic design introduces timeline and movement, so that the design content changes continuously over time. Through animation, video, transitions and other effects, dynamic design can present more content at different times, enriching the level of visual expression. At the same time, dynamic design is particularly outstanding in attracting audience's attention and enhancing memory points due to the changes and interactivity of its visual

elements. It is not only suitable for conveying complex or large amounts of information, but also able to combine sound effects and visual feedback to enhance the audience's sense of immersion and participation. Therefore, dynamic visual communication design has significant advantages that traditional static design cannot compare with in terms of enhancing information dissemination efficiency and optimising user experience.

2. The Current Situation of the Application of Dynamic Visual Communication Design in Digital Media

2.1. Application in the field of advertisement

With the diversification of information dissemination and the personalisation of audience needs, traditional static advertisements have been difficult to meet the high requirements of modern audiences for visual experience. The application of dynamic visual communication design in the field of advertising is extensive and in-depth, promoting the innovation and change of the advertising industry. Through animation, video, transitions and other means, dynamic visual communication design presents the advertisement content more vividly and attractively. Through rich visual effects and changes in the timeline, the advertising message can be conveyed to the audience with stronger visual impact, which improves the brand's memorability and communication effect (Liu & Fan, 2023). In addition, dynamic visual communication design also enhances the emotional expression of the advertisement, and through the storytelling presentation of animation, the brand can better establish an emotional connection with the audience. Take the Huawei Mate60 promotional film as an example, the advert shows a narrative visual path through aerial photography, dynamic transformation of distant and close-up scenes, and text presentation. The theme of the promo, 'Honouring the power of continuous development', runs throughout the film. Through the filming of natural landscapes, it connects the product with the magnificent power of nature, and conveys the powerful brand concept and product

performance.

Firstly, the film opens with an aerial shot of a golden-coloured poplar forest, accompanied by the hovering white text 'Mate 40 Witness the Poplar', which conveys a tribute to time and power. The scene then switches to the Kunlun Mountains, with the text 'Mate 50 Crosses the Kunlun', which is shot in an accelerated manner to enhance the sense of dynamism and tension. The camera then switches to a turquoise lake, displaying a beautiful scene of smoky waters, with the text 'Mate 60 Starts Again' signalling the brand's determination to continue to move forward. The most suspenseful part of the advert is a few seconds pause in the all-black interface, and the text 'Looking for new life on the earth' creates emotional anticipation and climax. The climax of the advert is the image of the Yarlung Tsangpo River, which shows the magnificent scene of water starting from a high place, converging and rushing, alluding to the development and breakthroughs of Huawei's Mate series. Finally, the camera falls on the new Mate60 mobile phone, skilfully combining the magnificence of the whole nature with the innovation of the product. The whole advert successfully conveys the spirit of the brand and the core value of the product through dynamic visual design, enabling the audience to deepen their identification with the brand in an immersive visual experience.

2.2. Application in multimedia and film

In the field of multimedia and film and television, dynamic visual communication design has become an important means to enhance visual performance and convey information through its unique narrative ability and visual impact. In modern film and television works, dynamic visual design is widely used in the opening and closing credits, special effects scenes and other parts of the film, through dynamic graphics, animation and special effects to enhance the narrative hierarchy and sense of immersion (Sun, 2023). Movie studios pioneered the use of dynamic logos, such as the glittering red star of the Bayi Studio and Disney's shooting star that cuts across the castle skyline, all of which are deeply

rooted in people's minds. These logos were displayed in animated form in the film credits, giving the brand stronger recognition and emotional connection through dynamic elements, and achieving great success. More and more enterprises integrate dynamic logos into film and television advertisements to make the brand image more vivid and effectively capture the audience's attention in a short period of time. In addition, dynamic visual communication design also occupies a core position in film and television special effects, such as the future city and spaceship flight scenes in science fiction films, which all bring the audience a shocking visual experience through fine dynamic design. These designs not only enhance the aesthetic quality of the film, but also promote the development of film technology, making the visual expression of film and television works more diversified and immersive.

2.3. Application in digital product design

In digital product design, dynamic visual communication design occupies an important position in UI (user interface) and UX (user experience) design. Dynamic elements make the interface design more vivid and intuitive through animation, transition effects, etc., which improves the user's operating experience and visual pleasure. Dynamic UI is not only for beautifying the interface, but also for guiding users to complete operations more naturally and smoothly. For example, through the gradient of buttons, zoom in and out of icons, smooth page switching and other dynamic effects, users can intuitively perceive the feedback of the operation, thus enhancing the efficiency and satisfaction of the interaction. In digital product development, such dynamic design elements not only enhance the visual impact, but also improve the user's stickiness and experience of the product. In game development, dynamic visual design is even more crucial, which not only determines the aesthetics of the game's screen, but also directly affects the user's immersion experience. Through realistic scene rendering, character animation and special effect design, dynamic visual communication can make the game world more vivid and enhance

the player's sense of participation (Liu, 2023). For example, in mobile phone games, dynamic icons, smooth transition animations, and real-time feedback operation interfaces are indispensable parts of the design.

3. The Development Strategy of Dynamic Visual Communication Design in Digital Media

3.1. Diversified interactive experience design

In diversified interactive experience design, dynamic visual communication can enhance the user's sense of interaction with the interface through a variety of specific means. Firstly, designers can use animation effects to increase the feedback of the page. For example, when the user clicks on a button, the button can give instant feedback and enhance interactivity through animation effects such as scaling, colour gradient or jumping. This real-time visual response allows users to feel the immediacy of the operation, thus increasing the sense of control over the interface. Secondly, scrolling interaction is an important element in dynamic design. In the process of page scrolling, designers can make the background, foreground and different levels of elements move at different speeds to create a sense of depth and three-dimensionality through the Parallax Scrolling effect. Users can create a dynamic spatial experience when scrolling the page, further enhancing the sense of immersion. Once again, hover animation is also a commonly used interactive design method. When a user hovers the mouse over a specific area, it can trigger changes in the elements, such as icons getting bigger, infoboxes popping up, etc., to provide additional content or guidelines (Wang, 2022). This implied information is presented through the dynamic changes of hovering, which not only saves interface space, but also allows users to obtain more information in exploration. Finally, with the popularity of touchscreen devices, gesture manipulation design has become crucial. By triggering animated feedback through gesture actions such as sliding, pinching, and double-tapping, it allows users to operate more naturally and smoothly, thus enhancing the overall interactive experience.

3.2. Personalised and customised design

In dynamic visual communication design, personalised and customised design can be realised in a variety of ways to adapt to users' individual needs and preferences. Designers can customize visual elements to meet users' needs by collecting users' behavioural data, interest preferences and other information. When designing dynamic advertisements, targeted content and visual effects can be presented based on users' browsing records and interest labels to enhance user engagement (Kou, 2022). Personalised dynamic design can be adapted to the needs of different user groups through customised presentation of content, such as dynamic changes in text, colour, graphics and other elements. This not only enhances the user's visual experience, but also improves the effective delivery of information. Another key step towards personalised design is dynamic content generation, especially in UI/UX design, where dynamic elements can be updated in real time based on user interaction. For example, the visuals and layout of a page can be dynamically adjusted as the user progresses through the site or chooses different action paths, ensuring that each user's experience is unique. Through such customised design, brands are able to enhance the user's sense of connection to the content, thereby increasing the user's stickiness to the brand.

In brand identity design, Nanjing Red Mountain Zoo's brand identity video is an excellent example of personalised and customised dynamic design. The brand logo combines the Chinese character '山' and the initial 'M' of the English word 'Mountain', forming a design style that combines Chinese and Western elements, with a high degree of recognition. Through dynamic visual design, the designers not only gave life to the logo, but also cleverly used red as the main colour to convey the historical and cultural meanings of 'Red Mountain' and the Nanjing City Gate. What's more, the animals in the animation, such as the slender-tailed mongoose, koala and orangutan, are all evolved on the basis of the logo, which not only retains the visual consistency of the brand's symbols, but also highlights the uniqueness

of each type of animal. In the animation, the changing shapes and dynamic movements of the animals show the meaning of 'animals in the mountains, animals living in harmony with nature'. Finally, all these changes return to the Nanjing Red Mountain Zoo logo, forming a complete and coherent visual experience. This dynamic visual design based on the logo not only enhances the personalised expression of the brand, but also achieves a customised effect in communication, enhancing the audience's memory and brand awareness.

3.3. Design expansion of Multi-sensory Integration

In the design expansion of multi-sensory integration, dynamic visual communication design can provide a richer user interaction experience by integrating visual, auditory, tactile and other multi-sensory experiences. Firstly, the combination of vision and hearing is the most common practice. Designers can add elaborate sound effects or background music to dynamic visual design to synchronise visual changes with sound effects, thus enhancing the emotional resonance of the message conveyed. For example, in product advertisements or film trailers, the rhythm of the music is consistent with the animation transitions, which makes the whole picture more dynamic and rhythmic and enhances the audience's sense of immersion (Zhao & Li, 2021). Second, haptic feedback is another important expansion direction, especially in mobile devices and virtual reality (VR). Through vibration or force feedback, users can feel tactile stimulation when interacting with dynamic interfaces, thus improving the realism of interaction. Nintendo Switch's HD vibration technology provides users with a subtle haptic feedback experience through its Joy-Con joystick. Compared to traditional joysticks, HD vibration can simulate a more realistic sense of touch, for example, by shaking ice cubes in a cup during a game, players are able to feel the ice cubes colliding and sliding through the joystick. This technology not only enhances the sense of immersion in the game, but also demonstrates the accuracy of its haptic feedback through the trial of mini games.

Players can sense the subtle changes in the game through vibration, which greatly enhances the fun of interaction and game experience, and provides a new direction for the development of haptic feedback technology. Again, the application of virtual reality and augmented reality technology (AR/VR) can also integrate vision, hearing and touch at a deeper level. Designers can combine the haptic feedback of VR helmets with 3D sound effects through dynamic visual design to build an all-encompassing sensory experience environment for users, bringing a deeper immersive experience.

3.4. Cross-platform seamless integration design

Seamless cross-platform integration design requires dynamic visual communication to maintain consistency and fluency across different devices and platforms, and to achieve unity of visual effect and user experience. To this end, designers first need to optimise the screen size, resolution and interaction methods of different platforms. For mobile phones, tablets and computers, the design needs to adopt Responsive Design technology, so that the interface and visual elements can be automatically adjusted according to the screen size, to ensure that the user can get a consistent visual experience regardless of the device. Animations and dynamic effects also need to be adjusted according to the processing power of different devices to avoid lag or slow loading on certain platforms. On mobile devices, simplify animation effects and reduce excessively complex dynamics to ensure smoothness; while on high-performance devices such as desktop computers, more complex dynamic effects can be used to enhance visual impact (Fang, 2024). In addition, the cross-platform integration design should also consider the differences in operating systems, such as iOS and Android have different interaction methods, designers need to customise the corresponding dynamic elements and gesture operation experience for different platforms, to maintain the platform's native design style and at the same time, to ensure the consistency of the brand image. Through this seamless integration of multiple devices and platforms, users can get a unified and high-quality

dynamic visual experience in various scenarios.

Conclusion

Dynamic visual communication design plays a crucial role in digital media. By enhancing the effect of information delivery, improving the user's interactive experience, and deepening the sense of visual and sensory immersion, it brings new creativity and technological breakthroughs to the fields of brand promotion, film and television production, advertising and digital product design. With the increase of users' demand for interactivity and personalisation of content, dynamic visual design has gradually transformed from static design to a more interactive and emotionally expressive form, which not only enriches the user's visual experience, but also improves the effectiveness of information communication. Looking ahead, dynamic visual communication design will continue to integrate artificial intelligence, big data, virtual reality (VR) and other technologies to promote the development of multi-sensory experience, personalised customisation and cross-platform integration. In the future, dynamic visual communication design will certainly occupy a more central position in digital media. This technology will play a role in a wider range of application scenarios, not only limited to visual performance, but also through multi-dimensional sensory integration, bringing users a more immersive and diversified interactive experience.

Conflict of Interest

The author declares that she has no conflicts of interest to this work.

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