

Research on Dynamic Text Design Based on “Smart +” Dimension

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Abstract: Intelligent technology makes the text design from static to multi-dimensional dynamic space effect, breaking through the limitations of two-dimensional static, so that the text realizes the multi-dimensional space effect of free deformation, diverse deformation and diverse composition. Dynamic text not only changes the traditional text design pattern, but also extends the meaning of the text. Based on this, the dynamic text design based on the “smart +” dimension is studied. Firstly, the appearance of dynamic text is briefly introduced. The generation and design form of dynamic text of new media are discussed, and the dynamic text based on “smart +” is also discussed. The design form was elaborated, and finally the new performance space for the special effects design of the title text was discussed. New media technology has completely changed the concept of text design, and dynamic text design faces new challenges.

1. Introduction

New media technology mainly uses computer as the medium for information processing, including wired transmission of the Internet, wireless transmission of the Internet, mobile media, mobile TV, electronic newspapers and other related technologies [1]. Among them, digital information processing technology plays a decisive role in the development of dynamic text design [2]. Different from its past media technology, new media technology has moved to the path of dynamic text design, enabling the information transmission symbols to be applied in new ways, such as three-dimensional dynamic texts that express three-dimensional spatial distortion, illuminate, rotate, and interact, and transmit information [3]. Also, entertaining vision. The text design in the new media environment integrates multiple media into one, forming a multi-perspective communication channel, and the text design pays more attention to factors such as emotion and interaction [4]. In the new era, how to design and optimize dynamic texts through modern intelligent technology is very urgent [5]. Therefore, the introduction of dynamic texts is introduced first, and the dynamic text design form based on “smart +” is introduced [6].

2. The Emergence of Dynamic Text

A new media technology based on intelligent technology LCD screen - the screen medium is a light color display, and the printed matter is a printing color or an ink color display, such as the black text on a white background, the paper printed image is a collection of black ink monochrome dots [7]. The electronic screen is displayed in pure black to display graphics, sometimes subject to resolution, and the graphics are presented in a flowing image mode, which will result in differences in the clarity of the graphics, and its haptic function enhances the user and the machine. Communicate and engage people to get a real experience [8]. The former is the form of the existence of things. The latter is a dynamic cycle of things. The performance of dynamic text design is mainly through the control of key frames. The key frame of the animation represents a loop of motion, while the middle frame is It is the speed rhythm used to control dynamic motion [9]. The intermediate frame has the effect of adjusting and changing the velocity of the text during the movement, and can make the movement effect of the movement rhythm from fast to slow, or from slow to fast. For example, the dynamic text played on the screen is displayed at a speed of twenty-four frames per second. Due to the movement changes caused by the text itself, as well as the short-term visual dynamization caused by the change of time or sequence.

In addition to the speed of the key frame and the control of the rhythm, you can also use the 3D dynamic production software to design the trajectory of the font action, in order to bring emotional visual infection. As shown in Figure 1, we use SketchUp software to design a 3D animation combined font “visual communication”, determine the font and text size thickness, select the background texture, place the text on the image, and then rotate the 3D font and direction. The angle changes. Finally, using the SketchUp scene function, each text rotation action is set separately, the corresponding scene is obtained, and dynamic text is exported. The use of 3D animation software to design and produce animated fonts, its text movement state and speed, motion trajectory, relatively free, irregular, especially the integration of new media and online media interactive platform, provides a space for the development of dynamic text design [10].

3. Dynamic Text Design based on “Smart +”

3.1. Diversified dynamic text design

In dynamic text design, dynamic text design has various forms, which can be single or multiple combinations, or dynamic changes in words in combined text, such as overlapping, layered, and rotary. Jumping, gradual change, light and dark change, virtual and real change, color change, etc., their expressions are not isolated, they can be combined and cross-combined to form a new dynamic text design form.

Common dynamic title text design forms: overlapping - word and word overlay creates a sense of space, font and shadow blur creates a sense of space; layered - text transparency, opacity, translucency changes to show its layering; Rotating - the rotation of the font around a center point or the rotation of the entire block; jumping - text bounce, tumbling, climbing type beating design; gradient - font shape and state produce continuous regular gradients and Azimuth, shape to shapeless gradient; light and dark changes - that is, the effect of the text from light to dark or from dark to bright; false and real changes - that is, the text has a virtual to the real, or from the real to the virtual change; color change - Each text can have a gradient of color. The dynamic text design has the operability of simulating real objects, and can enhance the memory in a very short time by flashing, jumping, gradual, and virtual font effects on the screen.

3.2. 3D cartoon head design based on “smart +”

Based on the “smart +” 3D cartoon head design, it simulates the accuracy, authenticity and infinite operability of real objects. It can generate strong visual impact by flashing, jumping, and flowing font effects on the screen. To enhance the memory of the program in a very short period of time. The three-dimensional cartoon head design is a unified body combining art and technology. The three-dimensional cartoon head design breaks the general conventional film head design mode. For example, the text can simulate the movement track of the flying sand, and the fine sand floats into the picture and then forms the picture of the text. Break up and then refactor to form a new text modeling model. The 3D cartoon head design covers computer graphics information processing technology, digital image processing technology, and digital audio processing technology.

Because in the post-editing operation of the cartoon head design, the 3D dynamic production software can not only better control the movement trajectory and special effects of the text, but also generate some interesting three-dimensional effects. Because the three-dimensional film head design has more freedom in creation than the two-dimensional film head, it can transcend reality, give full play to the creativity and imagination of the director, and turn the idea into reality. For example, dynamic text-assisted push-pull, rotation, flash, material changes, and special effects processing, as well as interactive movements that achieve text between near and far distances, as well as spatial special effects such as text projection or inward contraction.

3.3. Dynamic visual communication design based on “smart +”

In the digital media environment, visual communication design began to develop in a dynamic direction. Although the expressions of the design are different, the theoretical system, evaluation

indicators and practical methodologies are the same. “Dynamic visual communication design is a unique and creative combination of traditional graphic design language and film and television art. The design communication system combines the conveyance emphasized by traditional visual communication design with the narrative emphasis of film and television art. This duality is concentrated in the dynamic design of text graphics: on the one hand, designers need to use the graphical thinking of association and imagination to use the dynamic deformation process of the glyph structure of the text to interpret the meaning, semantics and design theme. Create a virtual connection between things and try to illustrate a concept. On the other hand, designers also need to use cartoon narrative thinking to incorporate text graphics as “characters or props” into time. In the sexual narrative framework system, the text has a certain degree of anthropomorphic or pseudo-characteristics. The graphical design of dynamic text is also very common in dynamic visual communication design such as dynamic posters and dynamic signs.

Finally, dynamic text based on “smart +” can be designed from the above three aspects, as shown in Figure 1.

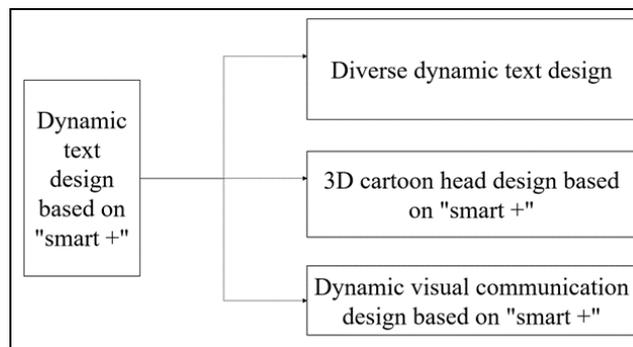


Fig.1. Dynamic text design based on “smart +”

4. Dynamic Text Design Special Effects form based on “Smart +”

4.1. Animation software and post-synthesis

The design of 3D titles requires animation software and post-synthesis software. In addition to the commonly used editing functions, these professional-software also have a special function to deal with special effects. The concept of “special effects” is literally “special” expressive and appealing. The visual effect, “special effects” is different from normal visual effects, can be said to be uncommon or obtained by abnormal means. When this special technology is quickly applied to the production of in-slice text, it can be two-dimensional or three-dimensional, or it can be the effect of still or animation. CG technology realizes the special effects of the cartoon head, the special effects of the particles, the special effects of the fluid, the special effects of ink and wash, these technical means are complex, because the visual effects of the choreography are different, the form of its expression is more diverse. Therefore, it is only a special effect form for the common light effects, flame, ink, and skylight. description.

4.2. Using multiple light effect modes

As a special effect that can stimulate people's eyes, light effect is usually to make a good subtitle layer, add enough blur to it with the plug fast blur, and then animate the size, position and transparency of the subtitle layer. Key keyframes allow the light to move and rotate alongside the multi-layer subtitles, allowing the flare to produce a flickering spatial, temporal, and rhythmic light effect that increases the dynamic effect. In the use of light effects, there are lens light, flash, sweeping, flying, shooting, flowing light strips, etc., such as the packaging head design of CCTV-6 movie channel, which uses a lot of star effect in the late special effects. The flowing light effect, the point light effect, and the light are used to set off the atmosphere of the picture, and the picture adopts a dark color background to highlight the text light effect. Light effects are produced in a variety of ways, such as the large number of circular light effects produced by the Athens Olympic

Games using the prototype of the Olympic rings.

4.3. Using flame effects

It is not uncommon for flame effects to appear in a variety of titles and video advertisements in an auxiliary production. Flame special effects can be produced by using CG technology particles or fluids. Using CG technology to directly generate special effects elements can not only greatly reduce the risk of real shot flame effects, but also can be easily customized and modified, and even flame effects can be Each stage of division is controlled. Figure 4 is a representation of the flame effect in the title of the film, showing the visual effect of the flame burning of the font. Its main purpose is to make the title of the film stand out, giving the audience a new visual experience and more in line with the theme to be expressed. The flame effect manifestation is easy to cause the viewer to associate with the subject matter. The film head made in the above manner has various forms of flame, which can be used as a background to set off the text effect, and can also integrate the flame into the font stroke, so that the film head has a deep space sense and a strong visual impact.

4.4. Using ink special effects technology

The ink special effects technology film plays an important role in the performance of Chinese style and traditional commodity advertisements. The ink and wash film have a long history, and the expressions of calligraphy, engraving and Chinese painting are all unique Chinese art, so the production of such special effects. It is also more important. In terms of production methods, the ink color effect is generally a combination of real shot and CG special effects technology. Although the real shot is quite troublesome, it can get a more natural ink form effect, this special effect can be said. It is derived from reality and higher than reality. Its expression technique can increase its appeal. In addition, Skylight rendering effect technology, because the technology to achieve the natural real shadow effect as the core, the simple picture style realized by this technology has been favored by the producers in the film and television titles. The “Lifestyle” column title, the three-dimensional font creates a strong spatial picture feature, warm color gradient color enhances the film head visual effect. Skylight rendering effects bring color changes, from cold to warm contrast, simple and clear, the theme is outstanding.

Finally, the dynamic text based on “smart +” can be designed from the above three aspects, as shown in Figure 2.

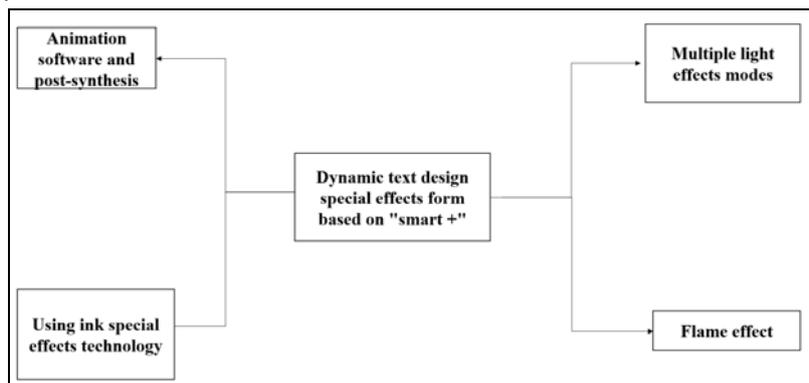


Fig.2. Dynamic text design special effects form based on “smart +”

5. Conclusion

The text design changes with the development of new media technology, from the original two-dimensional rendering to the three-dimensional model, from the plane static to the dynamic state. Based on this, the animation technology and hypertext based on the “smart +” technology are studied. The technology makes the text streaming design form have the sense of movement and time dimension that the past late technology fails to show. The dynamic text design under the new media technology means to watch in a new three-dimensional dynamic way and the concept of time

and space. And use text. Because the three-dimensional film head design has more freedom and surpasses the reality in the creation than the two-dimensional film head, it enhances the animation expression and appeal of the text. For example, dynamic text-assisted push-pull, rotation, flash, material changes and special effects processing, as well as the movement of the text from far and near, or from the near and far smooth movement, text outward or inward contraction. In particular, the development of CG special effects technology has realized the dynamic effect of the light effect, flow, ink and skylight rendering of the title text design, and once again expanded the new performance space of 3D dynamic text design. The new media enables the text design to enter through the screen.

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