



A Brief Analysis of UI Interface Design and Application in Art Design

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Abstract. After entering the new era of development stage, China's social economy and science and technology level have been greatly improved, but even so, compared with the western developed countries, China's science and technology still need to continue to in-depth research and development, so our mission is to keep catching up and successfully surpass the western developed countries. In terms of hardware and software, the two are different. Software is not limited by the process, materials and equipment. The core of software development lies in the ability of the team and the individual. Nowadays, with the continuous development and progress of Internet technology, various types of computer and mobile phone software can be seen everywhere in daily life, software interface design has a more important visual and influence, and people prefer to use simple operation and interface products. This paper mainly analyzes the basic application of the art and design form of the software UI interface, and discusses the design classification and design principles of the UI interface, so as to show the necessity and importance of the interface design.

Keywords: Key words: art design; UI interface design; design principles; application analysis

1 Introduction

The so-called UI interface refers to a software embodied user operation interface, which can also be called the main bridge of communication between users and the software. And UI art design is an overall design of interface beautification, including three parts: operation interface, operation logic and human-computer interaction interface. A UI with good aesthetic appreciation and ability can make the software more personalized, improve the taste, and also better optimize and improve the user operation experience and experience, and make the application of the software become more simple, free and comfortable, and then get the affirmation and love of the user. From the perspective of UI interface, this paper describes its practical application and design classification, and analyzes and studies the UI interface design and application in artistic design, aiming to provide certain knowledge cognition and reference for relevant people.

2 UI interfacial design

In terms of the conditions required for the current development of UI, its effective development is limited by the economic conditions and communication media factors, which makes China's UI design start later than that of other developed countries. However, China has a large land area and a large population, so it has a huge consumer market. Nowadays, all kinds of electronic products are constantly changing from generation to generation, and the development of UI design in China is also rapid, and now it is gradually becoming mature[1].

In terms of the function of UI design, when it started developing, it was still in a branch of software development. There was no special UI designer to design alone, almost all done directly by software developers. With the increasing impact of various information technology on people's life and production, software development has gradually transformed into an important means to assist operators to effectively deal with all kinds of information.

From the market perspective, the convenience and aesthetics of the UI design are the important indicators to effectively measure the UI design. And because the UI design can have a greater impact on the market, so many colleges and universities will UI design for design teaching course the focus of the learning course, especially interface design, design students not only can fully grasp the new technology and design concept, and social design enterprises can get more and more professional design talents, promote the development of UI at the same time, also can effectively improve the student employment rate.

3 Classification of the UI design

3.1 User research

In the initial UI design, the interface design is basically composed of the software writer, so the interface design style is consistent with the style of the software writer. As the market and the UI design are gradually closely connected, the UI interface design is no longer designed by the subjective opinions of the software writers and designers, and the real feedback and actual needs of the general users and the market should be fully considered[2]; And designers also need to understand the specific application scope and situation of the software in the market in detail, in order to determine the software service work process, characteristics and habits, to effectively stand in the perspective of software users and market needs to consider the problem, so that the designed products can be favored by the majority of users.

3.2 Interaction design

Interaction design is one of the key contents that software developers must learn. It mainly refers to the engineering of effective interaction between machines and people. The purpose is to write relevant operation processes and norms for the software,

aiming to promote the software to be more scientific and rigorous, and to give full play to the maximum application value and role.

3.3 Interface design

Interface design is currently one of the largest number of people designed, which can be collectively referred to as artists, and at the same time, it is also the main interface designer of software products. There is a big design difference between interface and software screen design. The design of software screen usually only needs according to the designer's own ideas, but the interface design needs to integrate certain emotional and psychological content, and the purpose is to make the interface more life-oriented and humanized[3]. In order to better increase the recognition of user interface design, designers also need to meet the specific needs of users as much as possible in the interface design, to reduce the user's operation difficulties and memory burden.

4 Relevant art and design principles of the UI interface

4.1 Simplicity

In the user survey, the simplicity principle of interface design is determined. When users first use the operation interface of a product for the first time, the operation will be incorrect due to the unfamiliar operation mode, which is also due to the complex operation interface. Therefore, when designing the UI interface, we should earnestly follow the principle of simple design, so that users can feel fast, efficient and simple when using it.

4.2 Interface elements

As far as universities are concerned, there is no professional discipline for UI interface design. Therefore, in order to comprehensively improve the personal ability of UI designers, it is necessary to provide a better learning environment and certain resources for designers, so that they can design freely. At the same time, designers to consider and design the interface elements, also need to consider the screen size, take the Android interface as an example, in the 160 DPI screen as the benchmark, we call the double diagram, namely $1 DP = 1 P = 1 P X$, the calculation formula is $D P * DPI / 60 = PX$, and as the interface elements to accommodate whether too crowded, complex and other references. In addition, UI designers also need to have a positive learning attitude, and constantly improve and strengthen themselves through in-depth learning and progress, in order to promote the UI design more reasonable and effective.

4.3 The overall layout of the page

In the interface layout design, we should integrate various knowledge, and scientific combination of various elements, clear the interface design subject, in the actual design, but also need to combine the specific situation and personal emotion and design language to carefully study the page layout, and the specific design from the point and line. And in the design, but also to pay attention to the principle of beauty, to deal with the density relationship between the elements, so as to promote the page layout is good and integrated.

4.4 Interface size selection

The interface size should consider the screen resolution and the size of the display (as shown in Table 1). If the interface is beyond the maximum range set by the screen, consider adding the scroll bar[4]. In the interface design, often appear split screen design, among them, the first screen should be carefully designed, because the first screen has a "golden screen", since all the design around the screen design, so must be the first screen carefully, to ensure that two screen design style is consistent, design style can be fully consistent.

Table 1. UI interface specification and cut map fit size of iphonex mobile phone (self drawn)

equipment	APPstore	Home screen icon	set up	Spotlight	notice	Toolbar and navigation section
iphoneX (@3x)	1024×1024px	180×180px	87×87px	120×120px	60×60px	75×75px
Iphone6s+ (@3x)	1024×1024px	180×180px	87×87px	120×120px	60×60px	75×75px
Iphone6+, 6s+ (@2x)	1024×1024px	120×120px	58×58px	80×80px	40×40px	50×50px
Iphone5, 5s, 5c (@3x)	1024×1024px	120×120px	58×58px	80×80px	40×40px	50×50px
Iphone4 , 4s (@2x)	1024×1024px	120×120px	58×58px	80×80px	40×40px	50×50px

4.5 Appearance and shape

When designing the product appearance and modeling, the relatively common and simple geometric forms such as rectangles, circles, and trapezoids and diamonds are usually selected (see Figure 1). The designed shape should have a certain symbolic significance and smooth and soft, the rectangle has the characteristics of harmony and balance, while the circle has the significance of complete stability and unity, and the diamond has the characteristics of fairness and personality[5]. Some interfaces are based on the same shape, using a combination of various elements related to themselves to achieve a lively and peaceful design features.

4.6 Text and picture editing and typesetting design

In the whole interface design, the text part is the most important, but also the key part of the interface display, the font, font and color used, as well as the combination of words, the information coordination and arrangement of the text in the design will have a corresponding impact on users. In addition, it is also necessary to complement the pictures and text, in order to achieve both text and text, text combined with pictures, pictures to foil the text, so as to make the interface more active, can be the overall rich and strengthen the concrete form of expression of the interface art design. Good text, picture typesetting and design, can provide users with good aesthetic feeling and experience.

4.7 The use of color

Color can stimulate people's visual senses, produce a sense of impact when users receive information, and affect the user's emotion. Apply different colors in the design, can appear different effects, can produce different psychological feelings; to make the UI design more humanized, we should design can make people feel happy and happy color. To design customized interface colors for users to coordinate user psychology, so that users' physiological and psychological needs can be met[6]. UI interface color can be a guide to guide the user specific operation, color guidance. A good interface design flexibly uses a variety of colors to convey emotions to users, which is also a form of expression of UI interface designers. Color is one of the languages of UI interface designers, or an important bridge for designers to communicate well with users.

5 Analysis of application combined with reality

Due to the influence of "Internet +" and 5G, the current UI design has also made a new breakthrough. At the current UI interface design has appeared menu, icon, window and button[7]. And the current UI design need to consider and all kinds of intelligent products technology and convenience, innovation on the original products, such as WeChat, thin and QQ, in the product homogeneity is very serious today, WeChat and small software to let the user can get more comfortable smartphone interface experience, design and mobile screen to achieve perfect adaptation, the buttons and icon are adjusted accordingly, design a beautiful and concise and easier operation and identification interface, interface design is rich and reasonable, everything and neat, invincible in the market for a long time.

6 Conclusion

Nowadays, the UI design of all kinds of products is becoming important, and the UI interface can bring users more intuitive use experience. With the continuous enhancement of China's information technology in China, the UI interface design needs

to keep pace with the development of The Times. Only in this way can we get a place in the increasingly fierce Internet market competition. As a UI interface designer, not only should have a unique and avant-garde aesthetic ability, professional programming ability, but also have certain artistic skills, UI art design as art production, such design of UI interface will be more visual efficiency and artistic quality, to make all kinds of electronic products more color, so as to realize the true meaning of humanized design, and can truly enjoy the convenience and comfort of science and technology.

7 Reference

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