

Exploration of Human-Computer Interaction in Computer Game Interface Design

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Abstract: Games play a very important role in people's daily life, and human-computer interaction, as an indispensable element in the interface design of computer games, has been increasingly emphasized. In computer games, the human-computer interaction of interface design has a great influence on the user's experience, operation mode and gameplay. Based on this, this paper discusses human-computer interaction in game interface design from the basic principles of human-computer interaction in computer game interface design.

Keywords: Human-Computer Interactivity; Computer Games; Interface Design

Introduction

In the background of the continuous development of information technology, people's demand for computer games has become higher and higher. The page design of the game has also been gradually developed towards the direction of human-computer interactivity from traditional images, music and other aspects. In the actual game experience process, if the game interface design is not good, human-computer interaction is weak, it will directly affect the user's game experience, reduce the user's interest and playability, and even the phenomenon of user loss. Therefore, in the current computer game interface design, designers pay more and more attention to the human-computer interaction of game interface design.

1. The basic principles of human-computer interaction in computer game interface design

For computer games, the interface design should follow the basic sense of the general principle, that is to say, let the user in the game experience process, enhance the user interest and playability, so as to bring users a better game experience. For example, in the game to inform the user of the current location; how to enter the operation, how to withdraw from the operation and so on. To meet the requirements of human-computer interaction in game interface design, the following principles should be followed.

1.1 Principle of Simplicity

For computer games, not only should it bring users a better gaming experience, but also pay attention to the simplicity of page design, which is also one of the principles of evaluating the quality of games. A good computer game should bring users a good feeling of quick and easy to use at the first time they come into contact with the interface, and improve the user's gaming experience^[1]. As computer games for users, if the degree of simplicity is low at the beginning, it is easy to reduce user expectations, resulting in users staying on the page for too long and losing some users. Therefore, in the game page design, the principle of simplicity should be followed to improve the human-computer interaction of the game. Under the guidance of this principle, computer game page design will tend to be more simplified, bringing users a better game experience.

1.2 Principle of consistency

For game interface design, the principle of consistency is to require designers to follow the overall game style in the page design process, to ensure that the page design matches the overall game style and harmonization. This stylistic unity is not simply a superficial unity, requiring a consistent page layout can be, but requires that in the entire game design, page graphics, color, text, music, action, etc. to achieve unity, to achieve a sense of unity in human-computer interaction^[2]. Under the premise of the unity of the game interface style, it is also necessary to ensure the rationality of the interface layout, to ensure that the interface contains images, pictures, etc., in line with people's visual imagery, and consistent with people's perception in reality. At the same time, in the game interface, the use of commands should also be uni-

fied from beginning to end to perform running calculations.

1.3 Principle of orientation

In the game interface design, the operation information on the interface should have a clear orientation, guiding the user to see the operation information and then make the corresponding operation. In the actual operation process, users can clearly identify their location at a glance, and can also clearly find the operation information, such as “attack”, “retreat”, etc. At the same time, users should be allowed to jump between related pages at will, to enhance the game interface design. At the same time, users should be allowed to jump between related pages to enhance the interactivity of the game and bring users a better gaming experience.

1.4 Artistic design principles

The design of game interface is the same as other graphic design, need to follow the corresponding principles of graphic design, such as contrast, interest, rhythm, etc., to comply with the picture of the main body and the background of the hierarchy and the order of browsing. Especially for the computer game interface design, the interface contains a lot of dynamic elements, such as the action of the game characters, etc., and the balance of static elements, including the operation of the information buttons, text commentary, etc., the designers need to achieve a reasonable distribution of these elements to achieve balance. At the same time, give full play to the utility of dynamic and static elements, the use of dynamic elements to the user tape its point of entry and exit, and to do in and out of the point of echo, coordination.

In addition, for computer game interface design, to reflect human-computer interaction, it is also necessary to reduce the impact of the game on the computer, to avoid the use of standard interfaces and so on.

2. Human-computer interaction optimization strategy in computer game interface design

2.1 Opening up new input and output methods

From the viewpoint of current game interface design, the most common way of human-computer interaction is the human-computer interaction of multimedia user interface^[3]. With the continuous development of information technology, the game interface design has added new elements such as music, animation and so on in the process of development, but the user input method still maintains the traditional way, using the keyboard, touch screen or mouse to input, which means that the input method still maintains a single channel, and has not carried out innovation. Therefore, designers can start from this perspective to open up new input methods in interface design, such as combining voice, gestures, etc., to enhance the human-computer interaction of interface design.

2.2 Toward intelligence and integration

The rapid development of science and technology, promote the development of materials, energy and other industries, new materials, new energy gradually applied to all walks of life, especially the development of microelectronics technology, for the development of computer games to provide more possibilities, so that the pursuit of excellence in the game interface becomes possible. Computer game interface design tends to be more intelligent and integrated, the operation of the game will be more simple and convenient, and the function will be more complete, to ensure that the computer game in the case of page simplicity, the design is more efficient. In addition, in the design process, the modeling will still be towards the direction of light, thin, short and small.

2.3 Highlighting the people-centered concept

In traditional interface design, humanization does not really consider the needs of people, but focuses more on the product itself, taking the use of the product's function as the focus of the design. However, with the development of human-centered concept, people's needs have been expanded to the spiritual level, game design needs to pay more attention to the user's sense of experience, to ensure that the user can safely and comfortably use the product, but also in the product to experience the joy, feel comfortable, to satisfy people's spiritual needs, the human-centered concept through the game design all the time, to truly achieve humanization.

2.4 Focus on the use of semantics

In game interface design, in order to follow the principles of simplicity and consistency, and to bring users an excellent game experience, we should also pay attention to the use of semantics. The use of semantics can better help users understand the game instructions, prevent ambiguity, and avoid the situation where ambiguity induces users to misuse; follow the principle of simplicity as much as possible, so that users can understand at a glance, and make the next step clear when they see the information. The ultimate goal is that through the use of semantics, self-expression and communication can be put into practice, so that users can better understand the game, better use of the game, and bring users to get a great experience.

In addition, in the prevalence of the concept of environmental protection today, the game interface design should also comply with the development trend, respond to the policy call, the concept of environmental protection throughout the game design, to enhance the game interface human-computer interaction.

Conclusion

It can be seen that human-computer interaction plays an increasingly important role in computer game interface design, which is aimed at providing users with a better sense of experience and interaction. Therefore, in order to improve the human-computer interaction of game interface design, we can start from opening up new input and output methods, tending to intelligentization and integration, highlighting the concept of human-centeredness, and focusing on the use of semantics, etc., so as to realize the human-computer interaction of game interface design, and to bring the users an excellent game experience.

References

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