Research and Design of Cross Screen Display Interactive Game Platform Based on IOS Device

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ABSTRACT

This article is based on the design and implementation of IOS cross-screen mobile game. From the point of view of design, this paper analyzes the design idea, the key point of game experience design, the way of game realization, and the design details and interaction details of the game production example. This paper focuses on the design and implementation process of developing cross screen mobile games with IOS. Finally, an across the screen mobile phone game is developed. This cross screen game has good entertainment and interactivity.

KEYWORDS

IOS, Cross-screen, Game Design, Interactive Design

INTRODUCTION

The widely circulated cross-screen interaction, which mainly refers to the link and interaction between the screen and the screen created through the mobile Internet, enables the TV to have interactive and two-way communication functions. For example, through scan, shake, search and so on, the app directly participates in
the interaction with TV programs, by snatching red envelopes, gift certificates, points, and playing with friends. This article across the screen is the actual visual effect across the screen, with the rapid development of mobile devices and the rapid popularization, apple mobile device with its unique style and simple operation, occupies a large proportion in the whole industry, apple support for Swift language at the same time, also recognized by the vast number of apple developers, more and more programmers in Swift to language learning and development, and this is also a trend of OC to Swift change. Via Swift to complete implementation across the screen effect of the game, the realization of flowing back and forth between the two display animation game, this will increase the entertaining game, and increase the sense of reality and interactive game.

GAME DEVELOPMENT PLATFORM

Xcode is the development of the development tool, it allows in Mac OS X operating system developed on the apple APP, whether the device or iPod, Mac even the required software can be developed, that is all can be applied to the apple device can be to develop it. Xcode has a unified user interface: code, visual tools, and allows debugging to be done in a clean, apple-specific window. Swift and objective-c are also fully compatible with C language.

This system is developed using the C/S mode and the user needs to install the client to operate. Users can share hot spots on the mobile phone, let another client link, make sure the two devices are in the same LAN, and it is convenient for both customers and developers. The algorithm of ball movement and impact rebound is studied and the communication of LAN is realized through the TCP which is encapsulated by the Socket, and the required communication requirements are completed.

GAME DESIGN

Game Description

Games began, finger touching the screen don't loosen, the small ball, slide your finger small club with fingers sliding, when let go, according to the speed and direction of the finger sliding, small club moving the fingers of the left in accordance with the original speed and direction, if encounter different boundary conditions or rebound or through. Game interface as the core, used to implement the game logic, first of all, a pale blue base on for the menu bar, click will appear the two menus is a suspended start button, the other one is the exit button. Server device on the left, the client devices on the right side, put together two devices flat, sliding on the left screen to produce a red ball, and with fingers sliding direction, movement speed is also in accordance with the fingers sliding speed, when the ball moved to
the edge of the screen if it is near the end of the service side, can smoothly through the screen connection, if not that side will rebound according to the physical point of view, so as to realize a ball to rebound in the two devices, no Angle and the speed limit. Thus, the basic effect and concept of ball crossing are realized. The device on the right also has the same effect of sliding the screen to produce small balls, and then bounces off the device to cross the line. Finally, click the ball to let the ball disappear.

**Game Design**

According to the above game analysis, this system has game, friends, ranking and challenge four module functions. As shown in Figure 1:

![Game Menu Interface Diagram](image)

**Figure 1. System structure diagram.**

**Game Menu Interface**

The main functional structure of the game homepage is shown in Figure 2:

![Game Menu Interface Diagram](image)

**Figure 2. Main functional structure of game homepage.**
**Game Interface Function**

The main functional structure of the game interface is shown in Figure 3:

![Game Interface Diagram](image)

*Figure 3. Main functional structure of game interface.*

**Game Interface**

The interface first determines the device is a server or client, if the client default is placed on the right, so can through the edge on the left, to the location of the menu in the upper left, and if it is the server, so the right can be through the edge, so the location of the menu on the right. As shown in Figure 4:

![Game Interface](image)

*Figure 4. Game interface.*
CONCLUSIONS

The cross-screen concept has become a trend, becoming a trend, which can make many applications not only in games but also in multimedia. This cross-screen game is based on Xcode as the platform for development tools and USES the Swift language to develop a mobile phone mobile game. First for the future of mobile games in the future development trend and the status and the future of mobile phone games is certainly commercialization, mobile gaming has become a fashion, a very promising industry business. In China, there will be a great development prospect and market, and China will usher in a great storm of mobile game development. The game works visually smoothly, but there are still a lot of deficiencies to be improved.

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REFERENCES