**中文摘要**

象棋起源于中国，最早可追溯到战国时期。随着时代的变迁，象棋的个数和种类以及玩法都有所变化，以至于演变成现在我们熟知的中国象棋。象棋的演变和创新可以让更多人参与到益智类竞技运动当中。

决战象棋是一款基于中国象棋行走规则的带有战斗力比较的游戏，当棋子攻击敌方棋子时会比较双方属性，胜者留，败者亡。结合战斗力比较以改变传统的中国象棋着法思维模式，让游戏带有不一样的趣味和挑战性，让双方玩家在游戏互动中得到更好的思维锻炼。

本系统利用Unity 3D游戏引擎开发，分为5个模块：计时模块、复盘模块、战斗模块、资源重用模块和界面。

关键词：战斗，计时，复盘，资源重用， Unity 3D

**ABSTRACT**

Chess originate in China, it dates back to the warring states period. With the changing times, the number and type of chess and the playing method make a difference, which evolves Chinese Chess we know. The evolution and innovation of chess can help more people participate in the competitive sports.

Battle chess, based on the rules of ChineseChess, is a game with comparison of combat power. It will compare the attributes of both sides when the chess attacks the enemy chess, winner survived, loser gone. Combining comparison of combat power to change traditional Chinese chess thinking mode, which makes the game fun and challenging, and makes both player get better mentai exercise in the game.

This system uses Unity 3D engine development, includeing five modules: battle, tiem, chessboard reuming, resource reuse, and interface.

Key words: Battle,time,chessboard resuming,resource reuse,Unity3D

**ABSTRACT**

With the two-child policy’s carrying out, there will be more and more newborns in China. Children of this age are experiencing early education, and parents pay much attention to their kids’ early culture. As we can see, early education market demands a new kind of study products, and new kind of learning ways as well.

Yunhai AR(Augmented Reality) Literacy Game is a software offering for children aging from 3 to 6, which solves the inconvenience of children’s cognition by means of AR technologyand changes the complanation of traditional children language tools. Yunhai AR Literacy Game is able to produce a three dimension world where sounds, vision and tactus can interact with each other. Sensorial stimulation and amazing 3D effect make the intelligence develop with interest.

This system includes five modules: image identification( Vuforia),verification code,[data analysis](http://www.baidu.com/link?url=u-OafOOnH77KEJ4Y4mCdN3mKRP8PN6_LV9QevrqVWtLH1pn-A3-eYg0FGcJJqep59A9PjTsI5w7R8jrtb5NLZjfcFUCjVFEzJiDEhEHF6xdzAiSsvvg3oCtuXE4uvzs6),modeling, and interface.

This system uses AR technology to exploit early education literacy game, providing children with some new kinds of possibility. It is believed that further use of AR early education literacy game will certainly stimulate next generation to enjoy studing.

Key words: Augmented Reality,image identification,early education,Literacy