

The Application of Virtual Learning Mode in the Design of Art Design Network Interaction Platform: Based on C++ Builder

Chen Jinhua
Chang Jiang Polytechnic
Wuhan, Hubei, China, 430074

Abstract: A system development platform based on C++ BUILD is introduced in detail, and how to configure OpenCV in C++Builder environment is discussed. Finally, two application examples are given on this basis. After the analysis of new media's intervention in public art design, the interactive digital public art design and practice of new media public platform is explained in detail, from the practice of interactive digital public art design and Chinese painting in interactive digital public art design. The methods and methods of public art design are analyzed from the two aspects of reference and application significance. Based on the classification framework of research methods that combines hierarchical logic, process logic and the characteristics of this field, this paper analyzes the methods used in doctoral and master thesis in the field of virtual learning community research in my country with research methods.

Keywords: Virtual Learning Mode, Art Design Network, Interaction Platform, C++ Builder

1. INTRODUCTION

In the intelligent monitoring system of real-time data acquisition, due to the complexity of the industrial site, embedded systems are often used as the site monitoring host to perform data acquisition and control functions [1]. The processing of large amounts of historical data will become a problem. This makes it easier, faster and easier to port to other platforms. A provides a number of ready-made classes and a number of controls, using them to build applications is very Simple [2].

With the advent of the information age, the computer network has become an important carrier for human beings to obtain information, spread culture, and exchange ideas [3]. The network interactive art design promoted by this is showing vigor and vitality. With the increasingly widespread use of digital image processing, disadvantages such as large amount of data [4], long processing time and slow speed have also emerged. Although the above problems have improved with the exponential increase in processor speed and memory capacity, they are still quite prominent [5].

Therefore, researchers continue to develop efficient image processing algorithms and image processing software packages. However, most teachers focus on the interpretation of the meaning of words in the teaching scene, and the analysis of style and style pays little attention to the part that expresses the rhythm and emotion of poetry [6]. The main reason is that poetry education in Taiwan generally focuses on poetic emotion. There are few people who cultivate love. Whether it is new media or public art, they all originated and developed abroad, and their research on foreign development is more advanced than in China [7]. From the conditions of the development of modern society in my country, we can know that due to the multi-dimensional development of new media, this paper makes a preliminary analysis on the application advantages and status quo of interaction design in the field of domestic environmental art design [8], and its development trend in this field. Forecasts are made in order to

promote the development of environmental art design in China.

A lot of results have also been achieved. Today, with the gradual popularization of handheld mobile devices and 3G networks in my country, the development of virtual learning communities has gained new opportunities [9]. In the future, the virtual learning community is expected to become a new stage for adult social learning and even people's lifelong learning. Because of its multi-task operation mode, good user interface and powerful database management functions, it has been widely used in the field of measurement and control [10]. Data exchange I4584J is a set of excellent numerical calculation, algorithm development, and system simulation software. It is characterized by its rich mathematical function library, optimized mathematical operation capabilities, powerful mathematical analysis and data visualization capabilities [11], and the applications it provides. Multiple toolboxes for various disciplines provide a variety of methods of interfacing with and other development languages [12].

Interaction Art Design on web-based is an interaction design based on network media. It is a new discipline focusing on user demands and focusing on interactive experience and aesthetic feeling [13]. This discipline is "dedicated to understanding and satisfying User expectations for using network products. The open source computer vision library OpenCV is developed by Intel's research laboratory in Russia. In order to consider the speed of calculation, most image processing software packages are written in C/C++ [14]. The integration of poetry and emotion art will help students to acquire the gentle and honest but not stupid poetry under the subtle influence and be able to understand the beautiful vocabulary of poetry Learning and improving the ability of composition, word selection and word use, so that it will benefit for a lifetime, the culture will take root and the living water source of work and life [15].

my country can only combine its own advantages and use the integration and grafting with traditional cultural knowledge to improve the development level of public art in my country

under the new media environment. It has become a hot topic of research in this field [16]. After decades of development research, it can be said that it has achieved fruitful results. On the one hand, the diverse community model strengthens the collaboration and interaction of the learners in the virtual environment. On the other hand, through the analysis of various effect factors in community communication, to a certain extent, it promotes the in-depth development of virtual learning community [17].

2. THE PROPOSED METHODOLOGY

2.1 The C++ Builder

Through the operation of the "segment selection" item, the monitoring of the corresponding segment can be started and stopped. Psychologists have designed different information presentation forms based on the cognitive load theory and conducted related tests. They have found a series of cognitive load effects and put forward corresponding information resource design principles.

The data acquisition and control output part is mainly to control the input and output cards, with the timer to monitor the current system status in real time and control the operation of the system. The algorithm processing part mainly calls the control algorithm written by 345/46 through the interface with 345/46 to achieve "Reduce the complexity of algorithm processing". Firstly, the design elements of virtual learning community are extracted from the research perspective of learning environment, and then each element of community learning is designed separately. In the design process of learning activities, in order to obtain better learning Experience. While processing and deeply mining knowledge resources, the retrieval and query system provides users with convenient operation of boundaries and various choices by looking for the relationship between various data. Full utilization of resources. Using the OpenCV library can write concise and efficient codes to solve problems in digital image processing and computer vision programming, which not only reduces the difficulty of programmers developing programs, but also shortens the development cycle of related programs.

The integrated development environment of C++Builder 5 does not contain MSComm controls, which need to be imported from VB or VC. After starting C++Builder 5, the static library of OpenCV can be used directly for MSVC, but it cannot be used directly in the C++Builder environment and must be converted. `coff20mf` in the Bin directory of the C++Builder installation directory. `exe` file, can convert the static library of the MSVC into the static library of C++Builder class.

2.2 The Virtual Learning Mode

In the research of microservices in academic libraries, it has been confirmed that users' continuous use behavior is affected by user satisfaction, and user satisfaction will vary with the quality of microservices and microcontents in academic libraries. Among them, the creation of virtual items in the case requires According to the needs of bank communication language learning, it aims to provide learners with an immersive learning situation. The overall implementation idea is to use the 3D modeling tools provided by the platform with the corresponding models and graphics processing software. The clustering dimension aggregation mode has outstanding characteristics, and its extensiveness and freedom make it more suitable for the characteristics of users (occupation information, subject areas, usage habits, browsing preferences, etc.) and publishing scenarios, and the dynamic

and timely nature of digital knowledge tags reduces learning and usage costs and greatly improves user friendliness. And this kind of diversified artistic development situation has made art gradually "fly into the homes of ordinary people", and can be accepted by ordinary people, instead of being untouchable by people before, no matter it is in a certain corner of public places.

In the specific implementation of outdoor environmental art design, interactive experience installations and related services will also be added. It means that learners can freely express their opinions in the virtual learning space, and discuss, negotiate and reach consensus with other members; clear goals and rules mean that as an organization, it has its own clear learning goals and experience. Learners negotiate the established community rules. This feedback system may be a computer terminal, or it may be an infrared sensor or other related technical devices that can receive signals.

2.3 The Application in the Design of Art Design Network Interaction Platform

Primary and secondary, strong and weak are relative relationships. When people recognize objective objects, in addition to making judgments on cognitive goals based on their subjective will and previous experience, there are also phenomena that the visual perception environment and specific factors of cognitive goals intervene. , get the information that the individual needs to know or feel the changes made by the environment to the individual's entry. For example, the application of infrared induction voice control technology in the Kuanzhai Alley Cultural Exhibition Hall of the Republic of China in Chengdu is a positive attempt to this effect, and it has received good results.

It means that as a learning community, it has a clear organizational purpose and specific organizational rules; the fourth is interactivity, which means that the virtual learning community is dynamic, and the subject and subject, subject and object can fully interact with each other. The core effect is verified. The part mainly focuses on two dimensions, one is the problems and advantages of the community itself. To revise and improve the virtual learning community by surveying learners' satisfaction with use, aiming to build an optimized learning community to prepare for the subsequent community experience learning. The second is the verification of the learning effect of the learner. This intervention affects the perception and cognition of the cognitive subject of the strong and the weak, the primary and the secondary. In the network interactive art design, various navigation graphics and text are like the guidance system in the traffic environment.

Make online Chinese teaching no longer just a textbook that is directly displayed, but a realistic teaching environment platform that can listen, read, and write. The course is based on the independent learning model. It is hoped that the first-line teachers can learn Your own needs. When designing traditional public art, most of them are hand-made. Simply put, they use hand-painted methods to design and produce public art. Although this design method met the needs of the society at that time for public art to a certain extent.

3. CONCLUSIONS

Practice has proved that the use of C++Builder to obtain data in real time through the serial port is very effective. The application of C++Builder not only accelerates the development process of the system, but the interactive digital public art design based on the new media platform has not

been popularized in my country. The design of this kind of public art needs more high-tech support, and the threshold of art has begun to rise. . The 3D virtual learning community based on Second life can effectively solve the above problems. It broadens the inherent paradigm of the current research on the construction of virtual communities, and focuses on the presentation form and construction mode of the community, such as the transition from a two-dimensional flat interactive interface to a three-dimensional interactive scene in the presentation form.

4. REFERENCES

- [1]Liu Jing. Construction and research of blended learning mode based on Moodle virtual learning environment [D]. Northeast Petroleum University.
- [2] Yang Xue, Liu Yingjie, Kan Baopeng. Research on the application of design-based research paradigm in network 3D virtual experiment [J]. China Electronic Education, 2008(10):4.
- [3] Chen Jia. Construction of virtual learning environment for teacher education micro-course based on SIOP model [D]. Capital Normal University, 2014.
- [4] Wang Hongling. Design and development of network-based self-learning platform [D]. Tianjin Normal University, 2011.
- [5] Wang Dongmei, Wang Jiyi. Research on interactive design of network teaching based on gamification learning [J]. Audio-visual Education for Primary and Secondary Schools, 2006(03):45-47.
- [6] An Youlin, Yang Suochang. Design and Implementation of Networked Test System Based on LabWindows/CVI and C++Builder [J]. Computer Engineering and Design, 2005(11):3042-3044.
- [7] Chen Yanyu, Chen Hui. Design of simulation platform for atmospheric laser communication system based on C++Builder 6 [J]. Microcomputer and Application, 2009(22):3.
- [8] Zeng Zonggen. Database Development Comprehensive Training Course Based on C++ Builder 2007 and SQL Server 2005 [M]. Higher Education Press, 2008.
- [9] Xiang Xuejun, Liu Ping, Xia Changhao. The application of project-based learning mode in the course of "Virtual Instrument Technology" [J]. Journal of Electrical and Electronic Teaching, 2006, 028(003):18-20.
- [10] An Youlin, Yang Suochang. Design and Implementation of Networked Test System Based on LabWindows/CVI and C++Builder [J]. Computer Engineering and Design, 2005, 26(11):3.
- [11] Ding Yimin, Fang Hao, Chen Shihong. Design and Implement of Simulate Experiment System on C++Builder [J]. Computer System Application, 2007, 16(1):85 -87.
- [12] Long Yao, Hu Yan, Lu Yanyu, et al. Application of virtual simulation experiment of medical function in distance teaching [J]. Laboratory Science, 2022, 25(2):5.
- [13] Qiu Chenyu. Research on constructing three-dimensional space and interaction design in virtual learning scene [J]. 2021.
- [14] Du Jun. Design and Research of Adult Mobile Virtual Learning Community Based on Android Platform [J]. Journal of Jiangsu Radio and Television University, 2012(4):5.
- [15] Liang Xiaoxiao. Design and practice of blended learning based on Moodle virtual learning environment [D]. Sichuan Normal University.
- [16] Fu Zhe. Design and implementation of computer room management system based on C/S architecture [D]. Xidian University, 2015.
- [17] Wang Yinan. Construction of digital education game elements in vocational education based on the framework of Connectivism [D]. Beijing Institute of Technology, 2015.
- [18] Ji Xin. Research on the design and application of WebQuest teaching mode in virtual venues [D]. Guizhou Normal University.
- [19] Sun Xiaolei, Wang Yingxun. Design of aviation virtual instrument based on C++ Builder control and OpenGL interface [C]// Proceedings of the 12th Annual Conference on Control and Application of Chinese Aeronautical Society. 2006.