Research on the Modern Music Composition Development Direction under the Digital and Computer Background

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Abstract— **In this paper, we conduct research on modern music composition development direction under the digital and computer background. We can hear the music work, at ordinary times is the musician and sound engineer through three different stages of product created by mutual cooperation. The development of computer music has impact to the music every aspect of life, including various music creation process, cause the changes of some design principles. This change may be denied the traditional, also may be denied the traditional that is on the development of traditional principles. We integrate the concepts and principles of the digital perspective to propose our methodology on issues of computer music development that holds vital significance and meaning.**

Keywords- Music Composition, Development Direction, Digital and Computer, Background.

Introduction

Digital music is the media, and entertainment, information and culture industries such as the common focus of attention. Digital music in the broadest sense of the term refers to the production, storage, transmission and basic consumption through digital music works, it not only includes online music, wireless music such as music, in the form of the nonphysical also includes music in the form of CD, VCD, etc. These substances as digital music in a narrow sense refers to through the digital production, storage, and through wired or wireless transmission and consumption in the form of the nonphysical form of music. The words just show part of the digital and the digital development direction. Digital should also include a combination of computer and Internet and the popularity of digital video.

Before discuss the contemporary music industry research activities, we will first need to understand the basic meaning and scope of the music industry, or the research object will be vague and cannot understand the research about the content. At the same time also need to discuss the music industry and cultural creative industry and the relationship between the art management, as because the music industry with development of theory and practice of cultural creative industry and the development of the theory and practice of arts management is a mutual relationship of patrimony, that is, constitute the interactive development relationship. In the music education field, our traditional education and teaching mode has already been fixed into system, but under the impact of the rapid development of computer music technology, it also affected by the different degree. In order to adapt to the needs of the development of science and technology education, teaching and the comprehensive introduction of computer music technology is to establish a strong competitive modern subject prerequisite is also the popular music in the common colleges and universities are the important factors of education, while cultivating the corresponding high-quality talents [1-3].

Along with the advance of computer technology and related software development, promotion, the computer music as a new generation of general art gradually forming, infiltrate the music creation, production, commercial music instruments, all levels, education, entertainment, creators and that as appreciators team growing. Now from the

specialized to the social and familial outspread, become an important branch of digital art, an indispensable position in the big hall of art. In today's information age, network pull people more and more close, Chinese and western culture blend mutually, mutual penetration degree is higher and higher, faster and faster, so the computer music into domestic like the bamboo shoots after thrive, almost covers the production and the areas of music appreciation, music has been effective. Computer music is the product of the integration of computer technology and the music art, the source of its development can be traced back in the 60s of the 20th century. Start as the computer music research from domestic universities, research means here also got a boost, embodied in the development software to assist the research. Accordingly, in the figure one, we demonstrate the digital and computer based musical creation system.

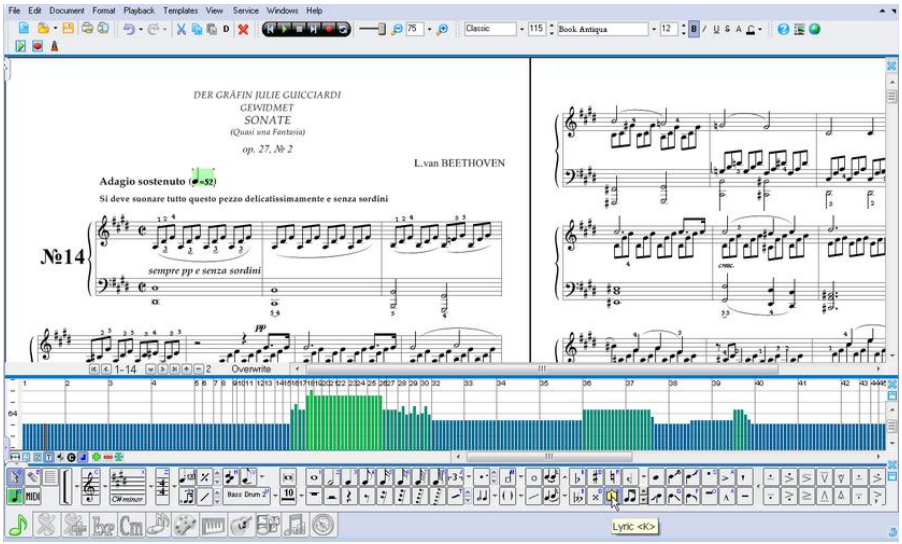

Figure 1. The Digital and Computer based Musical Creation System

In this paper, we conduct research on the modern music composition development direction under the digital and computer background. Digital music industry is the information technology, network technology and the product of traditional music industry integration. The United States, Japan and other developed countries of the digital music industry has formed the relatively complete industrial chain, and has produced great economic benefits. Digital music industry in China due to the human resources, market order and the influence of factors such as property right protection, as well as meet opportunities faced with enormous challenges. To deal with the corresponding issue, in later chapters we will combines the state-of-the-art reviews to form our unique perspective.

The Proposed Methodology

The Electronic Music. Electronic music in the process of transmission relies mainly on the new media, and the traditional music is through professional music show to show. Because of the Internet technology has the characteristics of public and private, and use the Internet technology to realize the spread of music to break traditional music dissemination way and the gap between the audience and close in time and space distance between the audience and the music [4-5].

Professional music creation in China for half a century of development, for the collection, research and application of general traditional Chinese music has made many achievements. Compose music composer to have to make great efforts to explore certain technique, to master the basic theory of the technology for flexible use. Our country to absorb the western modern music composer in the creation of innovative spirit, and not constrained by the direct use of some modern techniques. Music plays a leading role to the development of music, represents the degree of the innovation development of the whole music. The end result is to form new music creation music as music is to realize the continuous development and perfect power source. The emergence of basic electronic music creation is in fact a revolution in music creation, to a certain extent and to achieve the extension of the concept of music. Traditional composition and electronic music in composing techniques of composition differences can be generally summarized as the follows.

- Traditional music and electronic music composition in the creation idea and the technique are complementary. Traditional compositional organization way of thinking is linear, electronic music composition organization way of thinking for nonlinear, between although there are large differences in writing style, but still there is a complementary relationship.
- Electronic music is in the process of the creation of the first organization to melody, after on the basis of melody instruments. The form of traditional music in rhythm, structure, melody, and electronic music is through the computer software to carry on the audio call, implements the creation time and cost savings.
- Traditional composition mainly relies on the traditional idea and electronic music composition is broke through the traditional music source of creative inspiration, use a variety of possible inspiration for music creation, the timbre in music gives infinite possibilities.
- Compared with traditional music, the electronic music can create the music work type more extensive, break through the boundaries of the music development, there are many differences between their aesthetic ideas [6-7].

The Digital Music. Due to internal computer is using a digital signal, therefore must be continuous variation of analog audio information into a form of digital audio information. Conversely, for audio information output must also be the digital audio information reduction into analog signals. The voice of the objective world can be divided into two kinds one is the natural voice, a voice of the synthetic. Natural voice through sampling, quantization, the compression coding and a series of the steps, while synthetic voice with voice or music generator to generate as ordinary sound card besides can handle sampling digital audio that also can create all kinds of Musical Instruments.

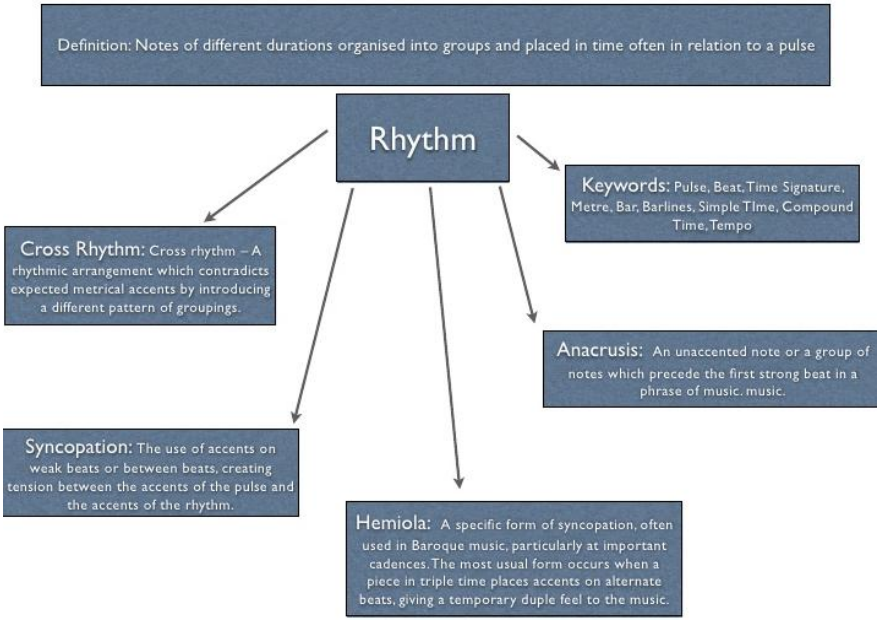

Figure 2. The Rhythm Features and Characteristics of the Digital Music

Natural audio information exists in the form of analog signals, the analog audio information into the digital audio information and the primary steps could be generally summarized as the follows. (1) Sampling is the continuous variation of primary analog audio signal into a digital audio signal of the discretization namely every once in a while to the analog audio signal amplitude sampling collection, get the corresponding discrete amplitude. (2) After sampling and quantization of the binary audio data directly into the computer will take up a lot of storage space, is not conducive to computer processing, therefore, also to the digital sound information should be organized according to certain rules, namely encoding. (3) Sampling the discrete signal sequence for analog, still need to put them into digital quantity. This is done by conversion circuit as converted digital by binary number called quantitative figures. (4) Musical instrument digital interface MIDI is to make electronic music equipment can communicate with each other connecting standards. This standard includes hardware MIDI interface and signal transmission protocol. MIDI recording the key number, strength, duration and other data, and does not record any actual sound values as synthesizer on the sound card, which is based on the meaning of these records data represented by the synthesis, and then interpreted as let synthesizer voice instruction and play music through the general speaker [8].

The Music Post-production. Use the Nuendo to post-production music is only a means, after all Nuendo only our tools in post-production, its development provides a more convenient conditions for creation of music, how to use the Nuendo post-production needs us to achieve the desired effect in the process of music making constant exploration and improvement, fully grasp the Nuendo bring effect and external effect device features and functions, to master the principle of post-production, do get twice the result with half the effort to produce excellent works of literature and art. As for the more in-depth analysis of the issues, we summarize the corresponding characteristics as the follows. (1) A lot of equipment while recording work at the same time, will inevitably produce interference between electrical and cause noise. This kind of noise in the high frequency and low frequency part is likely to be produced. We can in the original sample distortionless condition with high pass and low pass filter to eliminate them.

Actually to filter out, is only a small part of the extremely high frequency, and the extremely low frequency. (2) Simulation of the various environmental reverb processors is commonly used in post-production sound effects. Reverberator parameters usually include shape and size, early reflection time, room reverberation time, early reflected and proportion of reverberation time, reverb density, high frequency and the low frequency reverberation time, and so on. Some software also can adjust reverberation reverb processors of the proportion of the high, medium and low frequency and core frequency points. (3) Actuator is a kind of harmonic oscillator, acoustic properties using the person's psychology, the voice signal to the decoration and beautification of the sound processing equipment. By giving voice to increase high frequency harmonic components and so on a variety of the methods as can improve the sound quality, sound, improve the voice penetrating and increase the dimensional feeling of sound. Modern actuator can create high frequency harmonic not only, but also has the function such as low frequency extension and music style, make the bass effects more perfect, the music more expressive. (4) Shrinks mixes in the post-production is very important. Many times after adding effectors careful pre-listening to achieve their ideal voice can do after last shrink mixes.

The Future and Prospects of Computer Music. In the past often mentioned computer music, give person the expression is expensive equipment. Although composed of more and better hardware and software of computer music system can not only give us more professional on the sound quality guarantee, provide more creative means, and can provide us more convenient in operation, using. However, the computer music that is needed is the basic hardware configuration of a computer and a sound card and now sound almost become an indispensable part of the computer. So it can be said that at present we used widely in computer basic can meet the demand of the hardware of computer music, and lots of free computer music language and application software for the computer music creation in provides a good environment. It can be said that the computer music creation have relatively mature conditions is a great opportunity for the general practice [9].

Computer music making is mainly based on computer control center, with the MIDI technology and digital audio technology as the means and language communication, with synthesizers, electronic instruments, such as the sampler for audio terminal of a way of music making. From the perspective of music creation, can use this way to create music is a special kind of music genre, and type, people usually call the computer music, it has its own unique style of music, language and aesthetic features. In melody, melody structure, harmony, orchestration, and performance and so on the various aspects should have its own system, the difference between any other music forms with past. Relative to the software hardware is relatively fixed. In the history of computer music fifty years, the computer music software emerges in endlessly from a synthetic language to the real-time control application software. Roughly divided into four categories: direct digital synthesis software, digital audio editing software, music, software and the real-time processing software.

Conclusion

In this paper, we conduct research on the modern music composition development direction under the digital and computer background. With the development of the modern computer technology, the computer almost penetrated the creation of the music, playing music, education, networking and the business dimensions of the music. Computer music technology in the development and utilization of the hardware system configuration, software and network transmission and so on all aspects of the increasingly mature that also more and more close to and improve the creation and even our

music cultural life, this is bound to affect the development mode of traditional music. Under the trend, we propose the new perspective on the corresponding issues that will help us to dig out the development orientation of the computer music.

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