COMPUTER MUSIC

Definition:

Computer music is music generated or composed with the aid of computers.

It also refers to a field of study that examines both the theory and application of new and existing technologies in the areas of music, sound design and diffusion, acoustics, sound synthesis, digital signal processing, and psychoacoustics. The field of computer music can trace its roots back to the origin of electronic music, and the very first experiments and innovations with electronic instruments and techno music at the turn of the 20th century.

Much of the work on computer music has drawn on the relationship between music theory and mathematics. The world's first computer music was generated in Australia by programmer Geoff Hill on the CSIRAC computer which was designed and built by Trevor Pearcey and Maston Beard. Subsequently, Lejaren Hiller (e.g., the Illiac Suite) used a computer in the 1950s to compose works that were then played by conventional musicians. Later developments included the work of Max

Mathews at Bell Laboratories, who developed the influential MUSIC I program. Vocoder technology was also a major development in this early era. In the 1980s, Music Construction Set gave the average computer user the ability to compose music using standard notation, though its abilities were limited. Recently, MIDI technology has allowed personal computers to interact with synthesizers through a standardized interface, which has widened the use of computer technology.

Throughout the world there are many organizations and institutions dedicated to the area of computer and electronic music study and research, including the ICMA (International Computer Music Association), IRCAM, GRAME, SEAMUS (Society for Electro Acoustic Music in the United States), and a great number of institutions of higher learning around the world.

Nowadays, modern computer and web technology such as MIDI and mp3 give enthusiasts and composers unprecedented power to compose, manipulate, and play or perform music.

History

The Columbia-Princeton Electronic Music Center, now known as the Computer Music Center, is the oldest center for electronic and computer music research in

the United States. It was founded in 1958 by Vladimir Ussachevsky and Otto Luening who had been working with magnetic tape manipulation since the early 1950s. A studio was built there with the help of engineer Peter Mauzey (Luening 1968, 48) and it became the hub of American electronic music production until about 1980. Robert Moog developed voltage controlled oscillators and envelope generators while there, and these were later used as the heart of the Moog synthesizer.

Types of software

We can easily distinguish music software. There are sequencers, samplers, VSTs (Virtual Studio Technology).

Sequencers, such as Cubase, Nuendo, Logic Studio, are programms which allows you to add tracks MIDI or audio tracks and record or import audio and MIDI files. Along with the sequencers you can use VSTs (Virtual instruments) or samplers. The other category, Virtual Studios, include many instruments, soft synths and samplers and you can master your own mix. For example, with Reason you get a large number of synths, samplers, compressors, eq, etc, you can mix and master your own song but you can't plug your instrument and record audio.