

Sampling and synthesis in the music business media essay



Music has been revolutionised as a result of the introduction of new technologies, the way we listen and make music. Electronic technology has played a major part in the studio environment, like using state of the art equipment like digital mixing desks a far cry from the once so popular tape recorder. The electronic movement changed the way of studio techniques.

The 60s saw a great economic recovery after the war, lifting up many restrictions. The growth of consumer culture also brought about a massive outbreak of new digital equipment. The economic climate was improving all over the world thus taking a further step forward.

Thomas Edison, in December 1877 was the first to invent a record and playback device and for that he is a true pioneer. The machine used a revolving cylinder with a tin foil where sound was transferred. This was done via a diaphragm and stylus. The diaphragm would vibrate to produce sound. This made possible the availability for commercial recordings to be available for public consumption.

One of the very early pioneers of the digital age was Leon Theremin born in 1896. He moved to the United States in 1927 where he produced the Theremin synthesiser, mostly used in cinemas between the 40s and 50s. The first portable synthesiser was developed by Dr. Robert Moog in the 60s, while Les Paul was grasping the multi-track recording set-up. Les Paul had a purpose-built recording studio installed in the garage of his home in Los Angeles after signing up for Capitol records in 1947. Not long after that his recording facilities were widely popular with artists queuing up at his door step. His process of recording was to 'bounce' the recordings backwards and

forwards between two disc recorders. It was while playing around with the 300 series (tape recorder made by Ampex) that he discovered it could be possible to do a multi-track recording, by adding a fourth tape head to the 300 series, Paul would make multi-track recording a possibility. He spaced the heads on the machine, and was able to produce tape delay.

Sometime later, the electronic age was joined by an electrical engineer and later synthesiser manufacturer Dr. Robert Moog, who produced the modular Moog synthesiser. He was famous in 1968 with Wendy (the Walter) Carlos' first album 'Switched on Bach', which was entirely recorded using Moog's synthesiser.

Synthesisers work by manipulating sounds of a certain instrument, i. e. playing the same note on a cello and bass guitar, the sound won't be the same. The overall note will be the same, but the parts that make up the sound will differ. The use of a synthesiser can be seen in many popular tracks. Artists such as Jean Michel Jarre, whose album 'Oxygene' is a good example of multi layered synthesiser tracks, he recorded the entire album using only synthesisers.

The use of digital media technology has enabled engineers to restore older tapes and records to improve the sound quality, removing the imperfection associated with dirty tapes. It has also made it possible to reach out to a wider audience especially through the internet. Apple computers have always taken a lead role by using computers as a main platform in music creation.

In the early 80s the use of home based computers increased, thereby increasing the possibility of home recording studios. Thus we saw a decline and closing of most commercial recording studios as computer programmes were written to cater for non-technical musicians, to allow them to create music from the comfort of their own homes. Digital effects such as echo were being created by using microprocessors, before the use of controlled mixing desks. There are many advantages of using a digital recorder than the analogue tape. Using digital recording converts the electronic signals into numbers making it easier to turn the numbers back to electrical signals for playback. The advantage of digital data is that it improves the sound quality. Music software such as Pro-Logic or Cubase make use of MIDI to its advantage. Musical Instrument Digital Interface (MIDI) is what synthesisers; keyboards and computers use to communicate data. Another form of sequencing is looping. Loops are a pre-packaged form of kit like drums, rhythms etc which are pre-recorded and can be used in Pro-Logic and other compatible music software to use over and over with no limitations.

Analogue recording caused music, composition, and performance to be mediated by the apparatus of the recording studio and the technologists who controlled it. Digitization exhibits a similar mediating effect, though the inaccessibility of binary code creates a much larger gap between musician and technologist/programmer.