

Abstract

In the developing technology there appeared a need in the music industry to simulate analog effects in a digitally way, but not losing any quality of the analog sound. The reason is that the pro quality analog instruments could be very expensive and sometimes they could be rather large in size. Instead of the digital instruments run on a computer, they are relatively cheap and they can offer sometimes more than the analog ones. With their unique digital parameter handling systems, it is possible to achieve such a time based parameter handling that is impossible in an analog way.

This thesis will guide you through the process of transforming an analog effect into a digital one. The final digital model will be implemented in an iOS environment. We will get acquaintance with the structure of the circuit, it's behaviors. We will transform the analog system into a digital one, then, with the iOS resources, we will implement the digital system. During the work we use MATLAB to design the necessary elements.