

## **ABSTRACT**

Nowadays, the growth of digital audio increases rapidly and used widely for many application not only for telecommunication needed. However, behind the purposes of digital audio technology for many application, we also need large capacity and bit rate not only data storage purposes but also for transmission, because it is need a huge number of bit.

MPEG-1 is a standardization of digital audio compression, which at the beginning audio data need a huge bit can be compressed and resulting decrease number of bit, it is to thrift the capacity of storage data and use communication channel efficiently.

This final project doing a research how to learn digital audio compression algorithm with MPEG-1 standarization work, including layer 1, 2, and 3 for variable bit rate. Writer make a program which appropriate with MPEG-1 standarization layer 1, 2, and 3, then the result will be considered one to another. From the analysis result we can take a conclusion the performance of encoder/decoder which is using MPEG-1 standardization, for encode time, decode time and audio quality after compression layer 2 had the better result, for the quatity of size of audio file that MPEG-1 encoder gave, layer 3 had a better compression than the others.

Keywords : MPEG-1, audio, layer1, layer2, layer 3, compression, decompression.