ABSTRACT

Music is like a language. This paragraph is the example. Consist of sentences. Each sentences consists of words. These words are composed of the letters and the letters of the alphabet is taken from the already known one. Music also has the alphabet which called (scale). Each tone is identical with the letters that will together forming a chord. Human are often wrong in understading the words of people. So it is with music. People often enjoy music and and want to play it. But humans have a hearing limitaion to sound. Only some section of people who has high musicality can do it. Therefore, the author make an application to display the chord from a guitar rocording so the users can know the chord that being played on the recording.

In this final project the system using the *wav file of the guitar play recording. The sound signal will be detect by Wigner-Ville Distribution (WVD), where the sound signal will be represented in the time-frequency domain with the high resolution. Then, the extracted signel's frequency will be analyze so that we can decide the chord that formed in the guitar reording. The tendency of the WVD is the emergence of unwanted signel which called cross term or cross spectral. This can reduce the accuracy. To fix it we will use Cross Spectral Elimination to suppres the cross term and get the better accuracy.

In this project , the test will be conducted to determine the accuracy of the system, which comparing the indentified chord of the system with the real chord from the recording. The result from the test of the system is the accuracy obtained by 59%-73%. It can be concluded that the method used is quite not stable to analyze the guitar chord.

Keyword: ***wigner ville distribution, cross spectral elimination,*** **gitar,** ***chord,*wav***