

ABSTRACT

The aim of this research is to present an idea of using Phase Vocoder method in pitch correction for human voice system. The objective of the research was detecting the wrong pitch in singer's voice and correct it.

Basically, the research was formed by two major steps, pitch detection which is looking for the wrong pitch in recorded singer's voice and pitch correction or pitch shifting for the wrong pitch detected before. Fast Fourier Transform (FFT) method was used in tone detection step to get fundamental frequency of the tones. Whereas, Phase Vocoder method was used in pitch correction step to shift the wrong pitch into the right fundamental frequency based on the reference data.

To know the quality of this system, two parameters were used to measure the system's performance. they are accuration and mean opinion square (MOS). The result showed that the system can detect pitch with the lowest accuracy 84,78% and the system can correct tones with the lowest accuracy 75%. But, in MOS parameter, the system only give result 2.1 which shows that Phase Vocoder method good in correcting pitch only from the frequency, not from its quality.

Key Word : Pitch, Pitch Detection, Fast Fourier Transform, Pitch Shifting, Pitch Correction, Phase Vocoder.