Abstract

Time Base Modulation is a new method which introduced to hide an information in various digital data like audio, image and video, with laboring certain complication at time domain. Location, compression and also extension at time area will encode information in host file modified. By comparing file which have been altered with an reference, compression and expansion of time area can know for the process to detection of data hidden.

At this final duty will try to analyse and implementation this method at audio watermarking with approach Phase Vocoder method for process time scale modification. Then by using methods assessment of certain quality like MOS (Mean Oppinion Score), PBE (Percentage of Bit of Error) and also SNR (Signal To Noise Ratio) will examination and analyse to parameter quality of watermarking that is testing its robustness level after attack and its hidden level. For tools implementation will use Matlab version 7.0.

From analysis and examination at this method got that its recovery storey is bad at byte level but fair if in approach at binary level, its recovery storey level can reach above 50 % to heaviest attack like MP3 compression. For the level of hidden storey is fair. Distortion by audible will felt, this matter is caused by there is still dot of big discontinuity area between segment, but if applied at audio with catergory have a quick tempo or hard music this distortion do not so felt. This matter still can improve to repair with approach of other supporter method or with searching algorithm of certain time scalling that able to give very small ratio of scale compression and expansion.

Keywords: *watermarking*, *time base modulation*, *audio*, compression, *time scale modification, phase vocoder,MOS, PBE, SNR*