

Chapter 6 Conclusion

This thesis has presented a method to patch the encoded audio signals to conceal the compression artifacts. The patch method can be incorporated into all audio decoders, especially for MP3 and AAC decoder, to improve the sound quality. The method consists of two parts to conceal different artifacts. One is zero band dithering that aims to patch spectral valley to ease annoying “fishy” noise. The other is high frequency reconstruction that can extend audio bandwidth to make audio sound brighter. The patch method can apply to all the encoded music to improve the perceptual quality without any priori information.

Experiments have been conducted on intensive audio tracks to prove the improved quality nearly without risks in degrading the quality. Through both the subjective and objective measure, the method is verified to be able to improve the perceptive quality of encoded audio signals. Especially, the objective measurement by the perceptual evaluation of audio quality system, which is the recommendation system by ITU-R Task Group 10/4 has proven a significant quality improvement.

