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ABSTRACT

This project focuses on compressing images using Daubechies 4 Wavelet. Image compression techniques make efficient storage and transmission possible by reducing the amount of data needed to represent an image. Compressing an image is significantly different than compressing raw binary data. Of course, general purpose compression programs can be used to compress images, but the result is less than optimal. This is because images have certain statistical properties which can be exploited by encoders specifically designed for them. Also, some of the finer details in the image can be sacrificed for the sake of saving a little more bandwidth or storage space. The objectives of this project are to implement the Daubechies 4 wavelet transforms technique to compress an image according to the paper by Rismon and Sri Muliani (2003) and to evaluate the result of Daubechies 4 wavelet transforms technique in compressing an image. The scope of this project is the x-ray images of long bone with Jpegs format. From the experimental results, it shows that Daubechies 4 Wavelet transform can be used to compress an image through the decomposition and reconstruction process. In the future, this project needs enhancement to produce better result with implementing advance techniques.

Keywords: Image compression, Long bone Image, Daubechies 4 Wavelet, Decomposition, and Reconstruction

Table of Contents

Chapter 1 - Introduction	1
1.1 Project Background	1
1.2 Problem Statement	2
1.3 Project Objectives	3
1.4 Project Scopes	3
1.5 Significance of the Project	4
1.6 Summary	4
Chapter 2 - Literature Review	5
2.1 Introduction	5
2.2 Research on image compression	6
2.3 Image compression techniques	7
2.3.1 Fuzzy transform techniques	7
2.3.2 Neural network techniques	7
2.3.3 Wavelet-based techniques	8
2.3.4 EZW algorithm	8
2.3.5 SPIHT algorithm	9
2.4 Research on evaluation of the techniques	10
2.4.1 Peak signal-to noise ratio (PSNR)	10
2.4.2 Image compression ratio	11
2.5 Research on Daubechies 4 wavelet	11
Chapter 3 - Methodology	15
3.1 Introduction	15
3.2 Project framework	15
3.3 Gathering information	17
3.4 Data collection	19
3.5 System design	21
3.6 Implementation	27
3.7 Result analysis	27
Chapter 4 - Experiment	28
4.1 Overview	28
4.2 The Input and Output Images	28
4.3 Summary	35
Chapter 5 - Results and Discussion	36
5.1 Overview	36
5.2 Constraint	36

6. Chapter 6 - Conclusion	37
6.1 Conclusion	37
6.2 Future Direction	37
6.3 Summary	38
References	39
Appendix	42