CHAPTER 1
INTRODUCTION

1.1   Background

The damaged images can interfere the collected data and complicate the analysis result. The one which want to be tested is the result of both 2 and 3 dimension images. The aim of this research is to compare the result of two algorithm in reducing the noise in USG images.

There are many ways in reducing noise in the images. In this research, the writer uses midpoint filter and harmonic mean filter method. The data are USG baby photos from random babies.

USG images are filtered by 3x3, 5x5, 7x7, and 9x9 kernels. The writer uses MSE and PSNR to measure the level of accuracy in noise reduction as his research method. The result of MSE and PSNR will be graphed in order to ease the result.

1.2   Problem Formulation

1. What algorithm is suitable for USG image noise reduction?

2. Will a high PSNR produced by reduction be good?

1.3   Scope

The scope of this research is limited in comparison between the accuracy of algorithm midpoint filter level and harmonic mean filter and analyzed the suitable algorithm in reducing USG images

1.4   Objective

Create the program that can compare the noise reduction between using Midpoint Filter and Harmonic Mean Filter in USG images, with the parameter uses PSNR and the result is in graphical form.