DEVELOPMENT OF POWER FLOW SOFTWARE

A Project Report Submitted in Part of the Requirement For A Bachelor of Electrical Engineering (Hons)

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ABSTRACT

The aim of this project is to develop Graphical User Interfacing (GUI) software to perform the load flow simulation for a power system.

The software was developed using Borland C++ 5.02 and Microsoft Visual Basic (VB) Version 6.0. The single line diagram was captured from paint to Visual Basic to call bus and line input data form. The input data was inserted to generate the output consisting of the bus number, bus type, real and reactive power, power generator, the voltage and the total of bus. The load flow program was simulated to get the results of the output of the new voltage, angle and power losses graphically.

The IEEE 6-bus system was used as test system for the developed software.

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CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Visual Basic is a graphical implementation of the language that expands it into the Windows world. Released in 1991, it became an "event-driven" operating system where responses are built around events. Now, instead of prompting at the command line for a number, the users enter it into a text box and then press a command button and your program performs the computation. All of this is done (mostly unseen) by communicating with the Windows Applications Program Interface (API). Rather than having to write to the API directly, Visual Basic provides the interpretation for you-thus still keeping the language very simple.

At first, the Visual Basic product numbers climbed very rapidly as this language adapted and grew to the Windows world. It stopped for a while at Visual Basic 3.0 and there was a longer time span than normal before Visual Basic 4.0 came out. The reason for this was that the change from Visual Basic 3.0 to Visual Basic 4.0 was not evolutionary, but rather revolutionary. Visual Basic 4.0 was indeed, a work of programming art.

There was another long lag between Visual Basic 4.0 and Visual Basic 5.0. Once again, the language did a revolutionary, rather than evolutionary change. Nowadays, Visual Basic 6.0 is an evolutionary change over Visual Basic 5.0. Any time there is a revolutionary change in the product, there are always kinks to be worked out. Visual Basic 5 suffered from many kinks. All of those are now worked out, the product is stable and called Visual Basic 6.0.

Visual Basic 6.0 is flexible, powerful, visual, event-driven programming language. It has all the features needed to write a small program. It has all the features needed to write an incredibly complex program, as well. It is to use, and understand, and scalable in every way. [1]