Chapter 1 Introduction

BSVC is a microprocessor simulation framework. It provides a graphical user interface and an object oriented framework that simplifies the task of writing a microprocessor simulator. The goal of the project was to replace the Motorola 68000 simulator currently in use at North Carolina State University. However by using object oriented techniques and generalizing the user interface a relatively generic framework for writing microprocessor simulators has been developed.

History

BSVC started off as a simple 68000 simulator that supported the 6850 UART, but after decomposing the simulator into its components (processor and devices) it became apparent that it could be expanded into a virtual computer simulator that allowed the user to "build" his/her own computer. Instead of a single 68000 processor object it would consist of several processor objects and several device objects that could be connected together to build a computer. This effectively allows users to build a virtual computer that simulates the single-board 68000 based computers in the ECE 218 lab at North Carolina State University or any other computer as long as the processor and devices are supported.