

MIDAS Preliminary Description

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1 INTRODUCTION

The purpose of this paper is to describe MIDAS, a Microprocessor Interpreter and Display and Animation System, a system that provides the user with a real time simulation and graphical display of that simulation. The system is intended for instructional use, to acquaint the user with the workings of a typical computer system based around a production microprocessor, the Intel 8080. It consists of a discrete simulation of such a system, and a display program which gives the user a real time animation of the system's operation. MIDAS provides facilities for the user to control both the simulation and the display interactively.

What follows is a description of the features available to the user to control the system, a description of the simulation, animation techniques, and some auxiliary functions that enable the user to input data into the simulated system.

MIDAS is implemented on the Brown University Graphics System (BUGS). The reader is assumed to be familiar with the components of that system. MIDAS makes use of a standard low-level graphics support software package, the SIMALE Standard Graphics Package.¹ Parts of the system are written in ALGOLW and the rest in META4A Assembly Language.

¹See Webber and Burns, The SIMALE Standard Graphics Package Preliminary Description, available through BUGS.