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INTERP-700:
DOCUMENTATION OF A STUDENT, DESIGNED INTERACTIVE INTERPRETER

by

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CHAPTER 1

INTRODUCTION

1.1 GENERAL: This report describes an interpreter which will be referred to as INTERP-700. It examines and illustrates features of a high level programming language, much like APL, which is suited to a spectrum of users ranging from novice to experienced programmer. Emphasis is on documentation of INTERP-700 as it exists today, but reference is made to future enhancements which will increase the test and debug capabilities of the interpreter. Emphasis is on two areas - language documentation; and program documentation. It should be noted, however, that INTERP-700 is not a completely operational system and is still in the development stage. In spite of this, there are certain features which are operational in prototype form.

1.2 MOTIVATION: As programming systems and programming languages evolve, there is an increasing shift towards the utilization of languages by application programmers outside of computer science. This trend is illustrated by the development of programming languages such as BASIC, APL, and 'English like' CCBOL. There are several problems associated with this trend. Most languages are so rigid, that it is impractical to introduce new features without major revisions. In addition, languages are sufficiently difficult to learn that there is a reluctance to abandon one language for another. Languages are not sufficiently oriented toward ease-of-use, and there is usually an excessive 'learning overhead' barrier even between related languages. The