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A USER TRANSPARENT DISTRIBUTED
DATA BASE MANAGEMENT SYSTEM

by

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A MASTER'S REPORT

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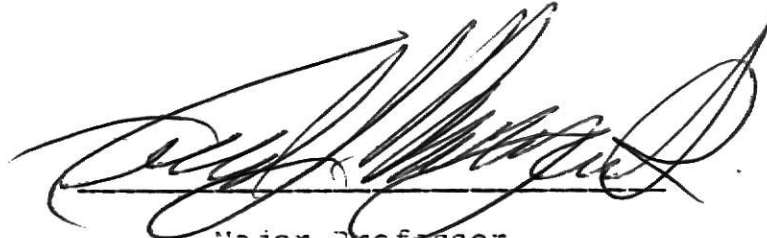
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I. INTRODUCTION

Data base management has received a great deal of emphasis in the last few years as business and government alike became aware of the role a data base plays in computer applications. Several data base management systems (IMS, System 2000, IDMS, TOTAL, ADABAS, etc. (1)) have been implemented to fulfill the needs of various organizations.

In spite of their power, existing data base management systems have some drawbacks.. One problem is that data base management manipulations require large amounts of computer resources, which can disrupt the performance of the system as a whole. The problem of data base security has received some attention in most implementations, but the application program, data base management system, and the data base itself still reside on the same machine. With a little ingenuity, it may be possible to bypass a data base management system's security provisions or access the data base without the use of the data base management system at all. An organization would also like to protect the physical media upon which the data base is kept. Some organizations keep multiple copies of a data base on machines which may be separated by great distances, but the major problem with this method is keeping all copies of the data base correctly updated. These are only a few of the problems facing current data base management systems.

The purpose of this report is to provide a description of a prototype distributed data base management system which will alleviate some of the problems described above.

Chapter two gives basic definitions used in this report and compares other work in distributed data base management systems to the methods used in this report. Chapter three discusses the hardware used in the system and the major software modules. The fourth chapter describes the software in some detail, while the fifth chapter discusses results obtained in this implementation. Chapter six lists several proposals intended to improve the system, and chapter seven concludes the report.