

CONCEPTS AND CAPABILITIES OF DATABASE MACHINES

by

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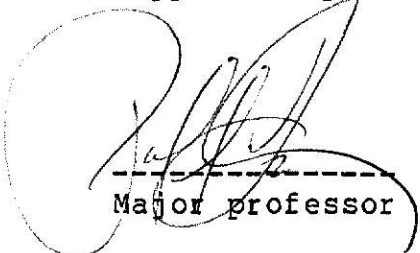
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CHAPTER 1

INTRODUCTION

The majority of DBMS's in use today are implemented on conventional von Neumann computers. However, conventional computers are not well-suited and efficient for performing DBMS functions, mainly because they are not highly capable of storing and retrieving information. In addition the processing and storage areas of these systems are inefficient. This raises the need for a specialized hardware device capable of handling DBMS primitives (e.g. storage, retrieval, update, etc.) more efficiently and cost-effectively; namely, a data base machine.

In the past few years there has been increased emphasis and research in the area of data base machines, and there are several reasons behind these increased research activities:

1. There is an increase in non-numeric applications such as database management.
2. The change of data-processing-oriented information management to database-management-oriented information management, and the multiple users accessing the shared database. This requires considerable software development and hardware