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| Thesis Title    | The Design of Distributed Database Management System on Parallel Virtual Machine (PVM) |
| Thesis Credits  | 12   |
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### Abstract

The possibility of enhancing parallel virtual machine (PVM) to support the distributed database management system (DDBMS) can be realised by employing POSTGRES. The processing power can be increased by connecting the computers together. Large and complex data can be divided into portions which are concurrently manipulated by using PVM. The work employs the reusabilities of the existing robust database management system called POSTGRES to support database management system and of PVM to support parallel processing. The utilization of these two software brings about distributed database management system. The architecture of the system is twofold : user interface and data management. PVM is employed as the interface between users and database system, whereas POSTGRES is employed to manage the database system.

The design of distributed database management system on PVM needs programming language to manage the data such as accessing and storing the data. Structured query language (SQL) is embedded on PVM. Since PVM is composed of heterogeneous workstations which are connected by using the UNIX operating system, the system can easily reach the distributed database from any heterogeneous workstation. The technique of data partitioning, which divides the data into portions, is also addressed. Such data are stored in heterogeneous workstations.

**Keywords :** Distributed Database Management System / Parallel Processing / PVM /  
POSTGRES / SQL / Data Partitioning