

Thesis Title DEVELOPMENT OF A FINANCE AND ACCOUNTING SYSTEM
ON NEC-610
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ABSTRACT

In the past, the uses of on-line systems were limited only to some applications because of the high costs of networking hardware and lack of easy-to-use software with high capabilities in data communications. However, systems based on data communications technology are presently used in a wide range of applications, since efficient hardware and software are available with much lower cost. Nevertheless, there are such many levels of computer networking that development of on-line processing systems has no unified principles, but rather depending on the type and model of computer network to be used. Also, design of on-line systems is vastly based on some system software incorporating with network operating system used and software packages specifically designed for support of on-line systems development.

This thesis is part of research and development of on-line systems in a mainframe computer environment. Specifically, systems development has been carried out using NEC system 610 to present a method of on-line system implementation with the following procedures

- 1) Use of a system software module, called VIS (Versatile Information System), of the ACOS-4/MVP XE-AF to create on-line system definitions such as a networking configuration, files and database, journal files to be used, and message control procedures, etc.

- 2) Division of an on-line system into applications, and transaction processing programs.

- 3) Development of transaction processing programs

Precisely the thesis illustrates in details the development procedure of a financial and accounting system that has been designed for the purpose of the Division of Finance, KMITL. The system in concern provides such main functions as the fiscal budget allocation, automatic daily ledger journalizing, income tax calculations, and advancement. For minor financial tasks, the system supports the faculties at KMITL such functions as inquiry of budget balance and advancing summary of individuals.