ABSTRACT

This dissertation studies about the disaster recovery planning focusing on data backup and which there is a data recovery capability in the event of a sudden, severe and unplanned disruption in an organization with network computing environment. The planning must ensure continuity of all the critical data and functions with minimum disruption and recover quickly during such calamity. The elements of a comprehensive and complete disaster recovery planning must include risk analysis, business impact analysis in order to recommend a suitable disaster recovery strategy. Hence, Local and Remote Data Backup System is the designed strategy based on the literature review and practical observation and planning in a business organization. This system was developed using Microsoft Visual Basic 6.0 under Windows 98 platform. Two major areas in data backup strategy were implemented. They were local data backup, which store data in a dedicated server in the local area network (LAN), and remote data backup, which store data in a remote off-site server. Data was backed up to or restore from the remote server over the Internet using File Transfer Protocol (FTP). Moreover, three kinds of additional backup functions were supplemented. They were scheduled backup, incremental backup and files documentation on backup progress. Scheduled backup allowed the local and remote backup executed in an automated manner with the time and days specified. Whilst, incremental backup enabled the system whenever data have been changed since the last backup and files documentation provided a systematic view on the time, date and transferred data for every backup process. The usability testing was conducted for two sessions, one in the business organization and the other in the Master Laboratory in the Faculty of Science and Information Technology. Functionality of all modules in the developed system had been tested successfully. Besides, this involved an artificial disaster where deletion of data file was performed. The testing result the deleted data file had been restored successfully. This indicated that the Local and Remote Data Backup System achieved the disaster recovery objectives to prevent data loss in network environment.