

**A DESIGN OF KEY MANAGEMENT AND PROTOCOL FOR SECURED
ELECTRONIC VOTING SYSTEM**

BOONYA SUWANMANEE 5436284 ITCS/M

M.Sc.(COMPUTER SCIENCE)

**THESIS ADVISORY COMMITTEE : DAMRAS WONGSAWANG, Ph.D. ,
CHANYOTE PLUEMPITIWIRIYAJEJ, Ph.D.**

ABSTRACT

This research aims at developing a holistic understanding within the context of the Electronic Voting (e-Voting) System. The managerial and operational of the electoral system be examined via three basic phase paradigms; pre-voting, voting and post-voting phases. The proposed e-Voting system employs both symmetric and asymmetric encryptions. The key management protocol has been designed to ensure the secure usage and secure distribution of keys among the entities of the e-Voting system. Any kind of fraud and any type of currently know attacks can be resisted, while the transparency of the system can be maintained. This research demonstrates how the security can be achieved by the proposed electronic voting system.

**KEY WORDS: E-VOTING / ONLINE VOTING / KEY PROTOCOL / KEY
MANAGEMENT / ELECTRONIC FRAUD**

98 pages