HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DEVELOPMENT OF A MIMIC DIAGRAM FOR THE NICOSIA WATERBOARD

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BY

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To my family, whose endless love and support were and will always be invaluable.

ABSTRACT

Water supply related information has become increasingly important to the use and development of a water distribution network.

Originally, water supply related information is collected, updated and stored on a constant basis. With the introduction of modern technology, these activities are computerised through a system complying to the international standards.

The Nicosia Waterboard which is the state agency responsible for potable water, is embarked upon a program, the Supervisory Control and Data Acquisition System (SCADA), in order to improve the efficiency and effectiveness of the Departmental activities.

This project aims at presenting a proposed design and construction of a mimic diagram that will provide a simple at a glance visual presentation of the Nicosia water distribution network.

A microcontroller will give an efficient and practical solution to this specific problem.

This project covers in detail the communication of the microcontroller with a personal computer and the interfacing with a Liquid Crystal Display on which all important information will appear.

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INTRODUCTION

The Water Board of Nicosia was established in 1953 and it was given the responsibility and utilization of potable water to the city of Nicosia.

Its service area includes all five municipalities of the greater Nicosia Metropolitan area, and today the Water Board of Nicosia supplies almost 200,000 people with 12,000,000m^3 of potable water, through 662Km of watermains, via 57,200 consumer connections.

It is well known that the Nicosia Waterboard adopted the today's modern water distribution system through continuous improvement and development which is according to the international standards.

The Water Board of Nicosia uses a Supervisory Control and Data Acquisition System (SCADA) for the proper management of the potable water supplies of Nicosia. Through the SCADA system all important information is available on a constant basis.

Forty area meters are part of the water distribution network and for all of them useful information is stored in a specific PC program.

The aim of such a project proposal was the need to provide a visual and simple presentation of the Nicosia water distribution network in such of form as it is easily understood by everyone.

In order to have a clear and fast understanding of the system it is proposed to use the help of a PC and a simple display system superimposed on the map of the actual network.

A dedicated software program in addition to a hardware design will enable the presentation of flow, pressure and other useful information in this simple display system.