INTELLIGENT TRAFFIC LIGHT

A Project Study
Presented to the Faculty of
The College of Engineering, Architecture and Technology
DE LA SALLE UNIVERSITY - DASMARIÑAS

In Partial Fulfillment
of the Requirements for the Degree of
BACHELOR OF SCIENCE IN ELECTRONICS AND COMMUNICATIONS ENGINEERING

DEL PRADO, Emerheene S.
GUINTO, Bienvenido R. III
MUSA, Mark P.

March 2008

TABLE OF CONTENTS

List of Tables

List of Figures

List of Appendices

ABSTRACT

Title:	INTELLIGENT TRAFFIC LIGHT
Researchers:	Emerheene S. del Prado
	Bienvenido R. Guinto III
	Mark P. Musa
School:	De La Salle University Dasmariñas
Pages :	77
Year:	2008
Degree:	Bachelor of Science in Electronics and Communications Engineering

The consistent growth of Traffic congestion has worsened the case in many countries. With this scenario, the proponents designed an Intelligent Traffic Light model (ITL) which relies on embedded sensors.

In this paper, the proponents presented first the intersection planning, followed by the gathered data. They also presented the conceptual design where it focuses on the prototype design. Intelligent Traffic Light aims to maximize the used of a single Programmable IC. This study used the cheapest possible sensor, which activates the sensor logic circuits and thus shifting the time-based process into a volume-based process of the traffic light phasing scheme.

The proponents also integrated computer simulation which is a powerful tool for analyzing complex and dynamic scenarios. This can be used effectively to analyze traffic flow patterns and signal light timing.

This paper also focuses on a 4-way intersection and proposed a four traffic light phase in order to implement right of way acquisition properly. It also includes hazard manual switch and full-sensor for extreme situations.

Construction of the miniature Intelligent Traffic Light model was on the last part. This model managed and control for a prediction of traffic flow control. This also estimates and predicts the presence of congestion.