

## ABSTRACT

**Title** : GPS Development to Monitor Electricity Meters  
**By** : Mr. Sittipong Naksanguan  
**Degree** : Master of Engineering  
**Major Field** : Engineering Management  
**Thesis Advisor** :

*Arthit Sode-Yome*

(Asst. Prof. Dr. Arthit Sode-Yome)

.....17...../.....5...../.....16.....

At present, the Electricity Authority of the Nakhonchaisri district, Nakhon Pathom province has a plan to monitor the quality of meters periodically. This system is incapable to determine the location of the meters due to lack of experience in auditing those regions. This makes it difficult to locate the meters and causes a delay on monitoring. And thus, the targets are not met. This study explores the development of the Global Positioning System (GPS) in order to monitor the meters. The implementation of the GPS will provide precise location of the meters with less time and fuel cost saving.

This study analyzes the Geographic Information System (GIS) on the map of the Electricity Authority of the Nakhonchaisri district, Nakhon Pathom province. The GIS is integrated with GPS and used to transfer the data into a GPS navigator to find the locations of the meters. This will enable the auditors to determine their exact locations.

The study found that when the GPS was implemented to monitor the quality of the meter, it was highly effective and accurate. The GPS can serve as a guide to locate the meter which will save service time from an average of 23 minutes per session down to an average of 10 minutes per session or a time saving of 59 % and fuel cost saving of 600 baht per month.