CHAPTER II

Problem Analysis

2.1 Company Overview

The company was found in Thailand in 1956. In 1964, the first automobile assembly plant was established at Samrong Nua, importing completely knocked down (CKD) vehicles for reassembly. A second plant followed in 1975, at Samrong Tai. in 1997, the Gateway Plant was recognized as one of the highest technologically advanced auto assembly plants in Southeast Asia built on 625 Rais at Gateway City in Plangyao District, Chachoengsao. The Gateway plant manufactured the passenger car in a unique cooperative project between Thai engineers and Japanese designers. In 2007, the company is going to start the 3rd production plant on 2,000 Rais in Banpho District, Chachoengsoa for supporting 100,000 units exported volume.

Today, the company has become one of the leading automobile manufacturers in Thailand, with a current registered capital of 7,520 Million Baht, productivity of 240,000 vehicles a year, and personnel numbering over 5,000, including an 88 - dealer network with 238 showrooms nationwide.

2.2 Current Shuttle Bus System

With the current 976 employees requested for shuttle bus service, the company decides pickup points for all routes by based on personal information and incoming data every year. 25 routes with 27 buses have been assigned for serving all demands. The company uses outsourcing companies to run shuttle bus service and pays them up to the number of bus and route distance; however, the company directly controls all routes management and design. The system can be shown below.

1. Two Zones separated for pickup points
   - Bangkok province: total 16 routes with 18 buses
   - Samut Prakarn province: total 9 routes with 9 buses

This research focuses on Samut Prakarn province that its pickup points can be illustrated below.

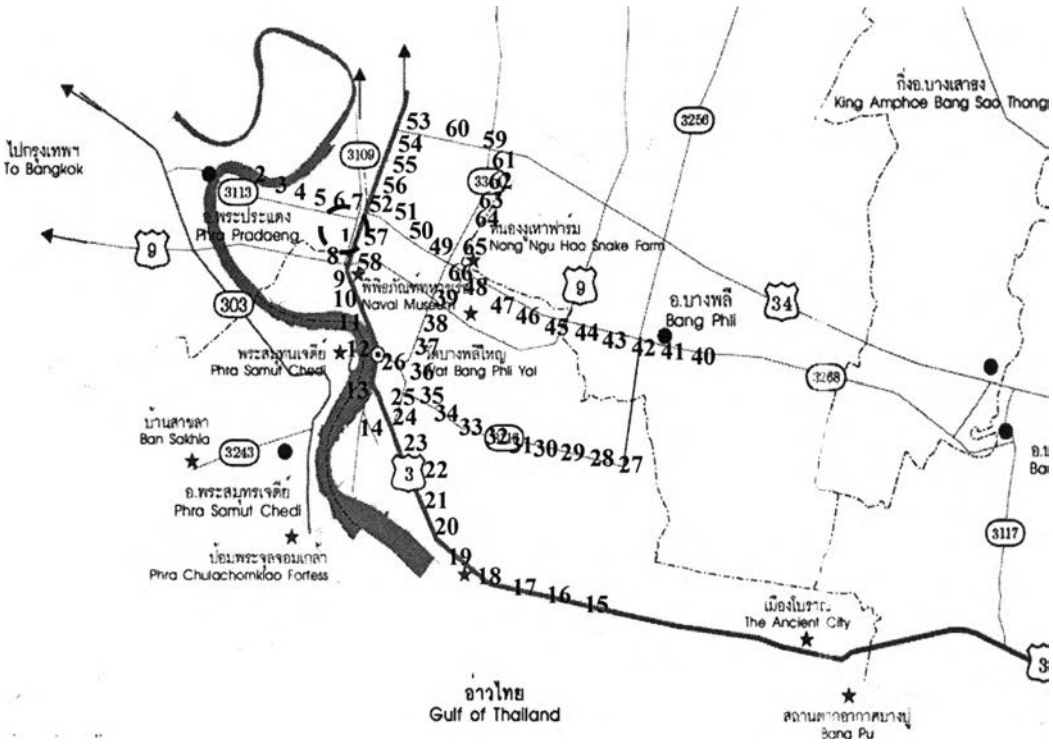

Figure 2.1 All pick up points in Samut Prakarn

From figure 2.1, pick up points are decided by based on employees' address and grouped to a place, easily acknowledged, bus stopped, and suitable area for wait.

2. Routes design

The first point has been assigned by starting from farthest point of the company and then continues to pick employees up at the other points. All routes in Samut prakarn can be shown below.

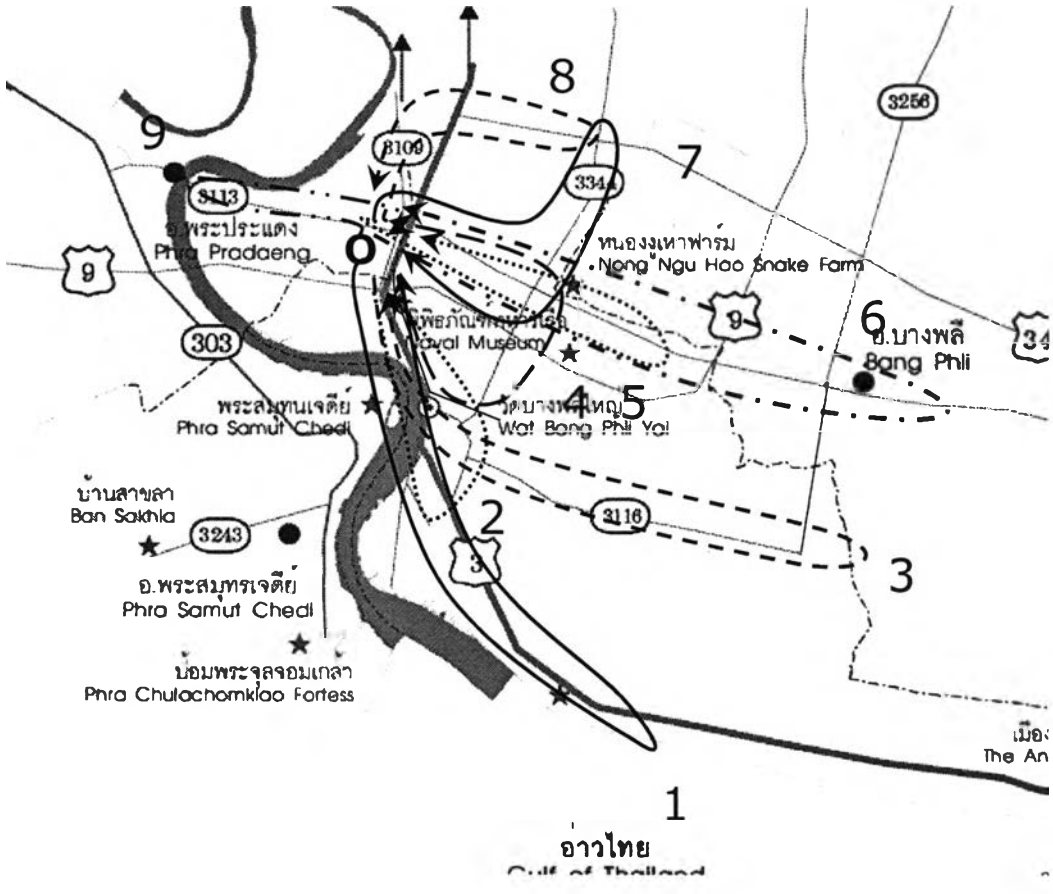

Figure 2.2 Current routes of shuttle bus service in Samut Prakarn

2.3 Problems of Current Shuttle Bus System

This research focuses only in Samut Prakarn province. After study the current shuttle bus system, the problems still remain because routes and number of shuttle buses are designed with no theoretical basis.

As mentioned in Chapter I, the problems may be listed below:

1. The number of shuttle buses is more than necessary.
2. In some routes, bus capacity is less than the number of passengers while other routes, there are vacant seats. This reason shows that the routing management is not efficient enough.
3. Some buses cannot arrive at office on time. If we change the departure time earlier, this might make some employees unsatisfied.

4. Moreover, the late arrival in item 3 severely affects the production line and working time also.
5. Buses stop at the same points, which makes employees confused and sometimes there are some employees remain left over in some routes.

The above problems are reasons, which affect the transportation costs and budget of the company. Therefore this research will focus on how to develop and improve shuttle bus service.