**CHAPTER 2**

Reviews of Related Studies and Literature

2.1 Foreign Study

KFC (Kentucky Fried Chicken)
 Model Name: Casio QT-6000 and UP-360 printer
 Installation Date: January 2005

Request for location Rotterdam-North 3 units of QT-6000s for fast food counter, 3 units QT-6000's are connected with one thermal order printer UP-360. All the QT-6000s are installed with UP-360 thermal receipt printer.

Request for location Barendrecht (Drive through)

This location has 6 units of QT-6000s both for drive through and fast food restaurant service. 2 units of QT-6000s, it needs two touch screens QT-6000's for order taking and order picking (drive through), 2 receipt printers and one 15' LCD for order confirmation at the street site. 4 units of QT-6000s, fast food counter with 4 units of QT-6000s are connected with one 15' inch LCD as order printer. All the QT-6000s are installed with UP-360 thermal receipt printers.

 Touch screen; embedded system, stable product, easy operation and acceptance by young operators, functionality drive through, speedy cashing, sleek looking good design and small footprint. The quality, functionality and the exposure of the touch screens must be for the future because KFC Rotterdam has a lot of outlets in and around the city of Rotterdam to replace.

 A. Heijermans BV, many years CASIO reseller in the Rotterdam area offers the management of KFC the QT-6000 solution and arrange the software for connecting QT- 6000 to a 15' LCD mounted in a display at the street (PC solution was installed 25 meters from the touch screen). The software house use the customer display port of the QT-6000 for this purpose. Every registration on the QT-6000 was displayed in the 15' LCD which is connected for the com port of QT-6000. When the customer agrees with the order and the operator presses the "store button", this resulting in not complaining customers at the payment bay and exit bay.

 The Rotterdam KFC-Franchisee management (founded in 1973) decided to purchase the touch screens from A.Heijermans for reason that they are supporting the people in the field for many year very well, not only in case of emergency. For this project the programming, demonstration and installation schedule planning was good and the experience that a 7 days a week service can be offered was the reason to decide to purchase a quantity of 9 touch screens in a network with connected printers.

 KFC needs design products after the evolution of the available brands in the Netherlands. KFC concluded that CASIO concept and design are the brand to choose for.
 The relationship between KFC (Kentucky Fried Chicken) in Rotterdam and Albert Heijermans Kasregisters Ltd. started in 1973. By that time the 1st KFC restaurant in The Netherlands was opened by Mr. de Kok, Senior Managing Director, at Bergweg 234 in Rotterdam. Cash Registers were provided by Mr. Batenburg, Senior Managing Director, of Albert Heijermans Kasregisters Ltd. KFC noticed within a short time that the job done by Albert Heijermans Kasregisters Ltd. is always accurate and correct. They have been the 1st company that the KFC talked to, even though the mother organization of KFC recommended several Point of Sales Systems. Albert Heijermans Kasregisters Ltd. did understand all requirements from KFC well and always provided a perfect service to KFC. This good long term relationship shows how well Albert Heijermans Kasregisters Ltd. provided their service to KFC. Even now after 30 years both children of the founders from these companies still cooperate with each other. Mr. Michel and Mr. Ron de Kok currently manage 5 KFC sites in Rotterdam. Cash Registers at these sites were installed by Albert Heijermans Kasregisters Ltd.. Casio Cash Registers QT-6000 have recently been installed at one of the newest sites in Barendrecht, while the QT-6000s had already been installed at the Bergweg site. These systems meet all wishes from KFC and they are a big success. It won't take long until the QT-6000s will be installed at all KFC sites in Rotterdam.

2.2 Foreign Literature

 Retail point of sale systems has their roots in a 1870s Dayton, OH saloon. Deeming himself a "Dealer in Pure Whiskies, Fine Wines, and Cigars," owner/operator James Ritty had a successful business. But, like most business owners, he faced a growing issue of dishonest employees who frequently pocketed money from the customers instead of depositing it.

 While on a steamboat trip to Europe, Ritty was intrigued by a mechanical device on the ship's propeller that tracked of the number of revolutions for maintenance purposes. Upon his return to Dayton, Ritty and his brother John began working to duplicate this idea to record cash transactions at the saloon with a mechanical device. In 1879, the Ritty brothers patented their invention as "Ritty's Incorruptible Cashier," or, as we know it today, the cash register.

 The Ritty brothers opened a small factory in Dayton to manufacture their cash registers. Several years later, Cincinnati businessman Jacob H. Eckert bought the business from the Rittys and formed the National Manufacturing Company in 1881. He later sold it to John H. Patterson who continued making improvements to the cash register, including adding rolls of paper used to record each day's transactions.

 Over the years, more enhancements were made to the cash registers until the early 1970s, when the first computer-driven cash registers were introduced.
 The first computer-driven cash registers were basically a mainframe computer packaged as a store controller that could control certain registers. These point of sale systems were the first to commercially utilize client-server technology, peer-to-peer communications, Local Area Network (LAN) backups, and remote initialization.
 In the late 1980s, retail software based on PC technology began to make its way into mainstream retail businesses. Today, retail point of sale systems are light years ahead of where they began. Today's POS systems are faster, more secure, and more reliable than their predecessors, and allow retailers to operate every facet of their business with a single, integrated point of sale system.

 (\*http://www.retailsystems.com/history-of-retail-pos-systems.cfm\*, July 28, 2009)

 A peer-to-peer network allows two or more PCs to pool their resources together. Individual resources like disk drives, CD-ROM drives, and even printers are transformed into shared, collective resources that are accessible from every PC. Unlike client-server networks, where network information is stored on a centralized file server PC and made available to tens, hundreds, or thousands client PCs, the information stored across peer-to-peer networks is uniquely decentralized. Because peer-to-peer PCs have their own hard disk drives that are accessible by all computers, each PC acts as both a client (information requestor) and a server (information provider). In the diagram below, three peer-to-peer workstations are shown. Although not capable of handling the same amount of information flow that a client- server network might, all three computers can communicate directly with each other and share one another's resources.

2.2 Local Study

# Mang Inasal

Mang Inasal, is a fast growing barbeque fastfood chain, originated in Iloilo City on Dec, 12, 2003. Serving great tasting barbeque and other pinoy favorites in
 Laging mabilis…Laging masarap… Laging abot kaya…

 A Mang Inasal Restaurant POS System includes computer, monitor, cash drawer, receipt printer, possibly a kitchen printer and POS software. Additional hardware and/or software such as kitchen printer, credit card reader, pole display, etc may be added at any time. Touch Screens: With its flexible user interfaces and programming, many retail business owners prefer to use touch screens. With this type of restaurant hardware, an employee can easily set orders and cancel an order within a second. It can also reduce mistypes and fasten ordering. Touch screens also uses less electricity and much easier to position on the counter table, but they are more prone to breakdowns.

2.3 Synthesis

Studies rely on information researched by the proponents. Related literature and studies help the researcher understand the topic better because this may clarify vague points about the problem. It also guides the proponents in making comparisons between findings with the findings of other similar studies. We research and gather this all information by internet, magazines and books.

 The architecture and design specialization will help gain the technical leadership skills that will need to design and implement high-quality system/networks that support Max’s Restaurant needs. And also will learn some ideas how to design, maintain, enhance and to improve the proposed system. This specialization will also build knowledge of developing security and flow of the POS System.