

**Functional Specification**  
**For**  
**The e-Computer Price Quote System**  
**Release 1.0**

**Authors:**      **Tony Chou**  
                     **Ping Yuan**  
                     **Cong Pu**  
                     **Airong Sun**  
                     **Nien-Heng Wen**  
                     **Sato Masashi**

## **Approvals**

This document has been read and approved by the following software design team members responsible for its implementation:

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**Vladimir V. Riabov, Ph.D., Director of Software Design**

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**Tony Chou, Project Manager**

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**Ping Yuan, System Analyst, Software Engineer, Quality Assurance**

---

**Cong Pu, System Analyst, Software Engineer, Quality Assurance**

---

**Airong Sun, System Analyst, Software Engineer, Quality Assurance**

---

**Nien-Heng Wen, System Analyst, Software Engineer, Quality Assurance**

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**Sato Masashi, System Analyst, Software Engineer, Quality Assurance**

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**Approval Registration Number**

## **Abstract**

This document describes the functions and features supported by Release 1.0 of the e-Computer Price Quote system.

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# 1. Introduction

## 1.1 Purpose

This document is the product of the requirement analysis of the e-Computer Price Quote system that is to be developed for computer manufactures to conduct direct sales with customers online. It specifies the features that meet the users' needs and the constraints that the system may face.

## 1.2 Scope

This Functional Specification document is to be used by the computer manufactures, system developers, and business functions defined and provided by the e-Computer Price Quote system.

## 1.3 Objective

The objective of the e-Computer Price Quote system is to provide an interactive electronic interface between computer buyers and computer manufactures. Specifically, this system presents computer hardware information to computer buyers and accepts their input through Internet. This system then provides the users with quick responses.

## 1.4 System Architecture

The e-Computer Price Quote system allows multiple Internet users to simultaneously access its web site and acquire certain computer hardware information through client/server/web/network/database information technologies. The diagram below illustrates the e-Computer Price Quote system architecture.

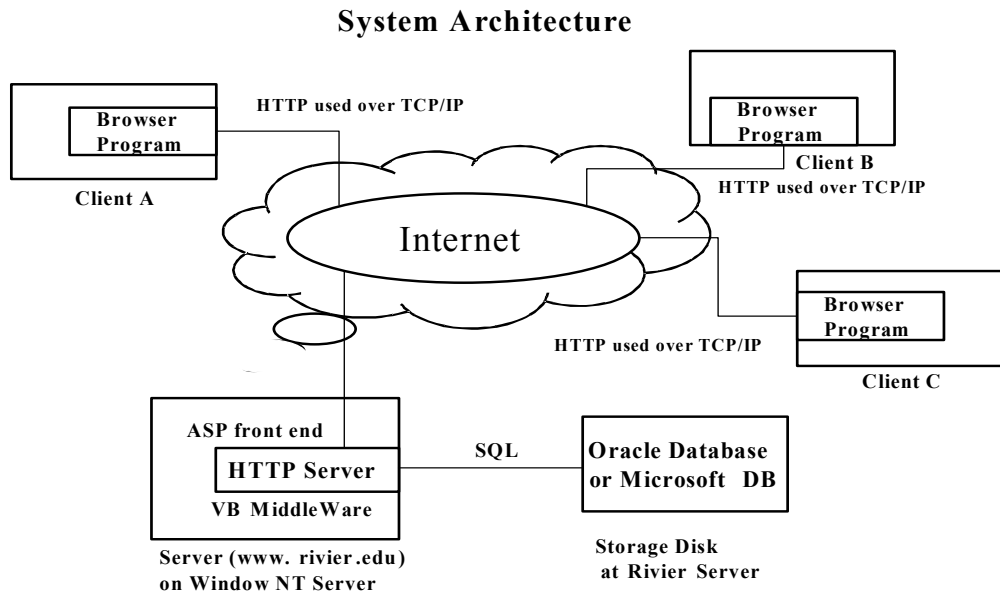


Figure 1-1 e-Computer Price Quote System Architecture

## 1.5 Summary

The e-Computer Price Quote system is a high-tech product that can dramatically increase individual computer manufacturer's sales revenues but also reduce its operation expenses in today's competitive business world.

## 2. Environment Characteristics

To implement its services, the e-Computer Price Quote system is connected to operating environment as described in section 2.1. Additionally, the e-Computer Price Quote system requires people with specific skills as described in section 2.2.

### 2.1 Operating Environment

TCP and IP are two most important protocols that implement the functions of the Internet.

Ethernet Switch Mb Hub 100 operates with dedicated 100 Mbps bandwidth to each server using Fast Ethernet

The Internet is operated by campus networks level of NSFNET (National Science Foundation Network) backbone.

Server environment consists of a SUN SPARC20 (Internet service), NEC Proserva SH (Academic server), DEC ALPHA 3000AXP (Library server), ALPHA Server 2000 5/250 (Administration server), and an Advance INTEL Pentium 200MMX (Help desk server).

Client/Workstation environment consists of a 32 NT Workstation, a color scanning station, 1 Windows 95 station with projection system (for the classroom instructor), and 12 PowerPC Macintosh computers.

### 2.2 People

People who interact with the e-Computer Price Quote system must have knowledge of Client/Server, Computer Network, Web Technology, and Database Design.

## 3. Input and Output

As soon as he/she enters the web site of the e-Computer Price Quote system, the computer buyer receives a welcome page (home page) that indicates services, provided by the e-Computer Price Quote system, along with instructions. Once the user click on "price quote", he/she is presented a quotation form (request page) where contains hardware information. The user then fills it out based on his/her preferences and then hit the "summit" button. Within no time, a price quote along with all specifications requested by the user (response page) comes out in front of the user's eyes. At the response page, the user can leave any comment. Also, if the user feels the price is competitive and attractive, then he/she would be happy to fill out a registration form (registration page) and submit it. Otherwise, he/she can hit the "exit" button. With or without registering with the service provider, the user is led to "Thank you" page. Figure 3-1 illustrates the data flow of the e-Computer Price Quote system. (Note that at any page the user can "back to home page", not shown in the figure.)

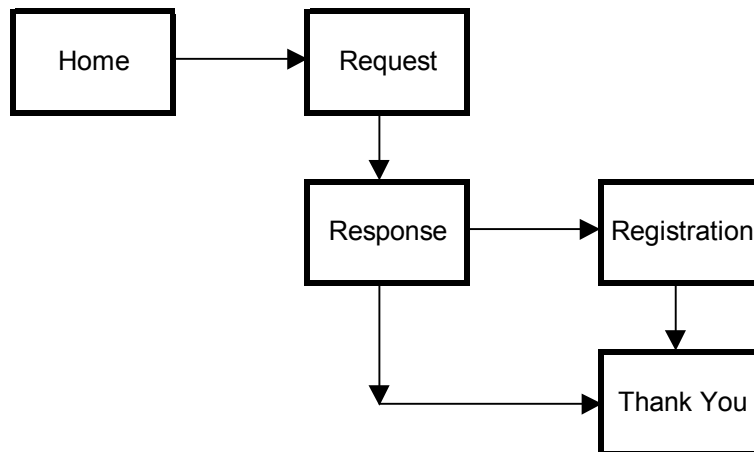


Figure 3-1 Data Flow of the e-Computer Price Quote System

## 4. System Component Features

### 4.1 Client/Server

### 4.2 Network

### 4.3 Web Site

Designed as the interactive interface, the web site will have to be friendly, innovative, and easy-to-follow. Also, for ease of use, services/information in this windows based web site are menu-driven/mouse-click.

Referring to Figure 4-1, in addition to containing company name on the top, and “back to home page” button at the bottom, every page has its own function.

#### 4.3.1 Home Page

A welcome page, it gives the visitor an excellent first impression. It contains services available and their instructions. Service is just a click away. On its both sides, dynamic advertising is for other businesses.

#### 4.3.2 Request Page

This page contains hardware information that is menu-driven.

#### 4.3.3 Response Page

This page gives the price quote for a request and a comment box for thoughts, suggestions and ideas.

#### 4.3.4 Registration Page

This page takes basic customer information for further contact and services by postal mail or e-mail or phone.

### 4.3.5 Thank You Page

Thanks for taking time to visit the web site of the e-Computer Price Quote system.

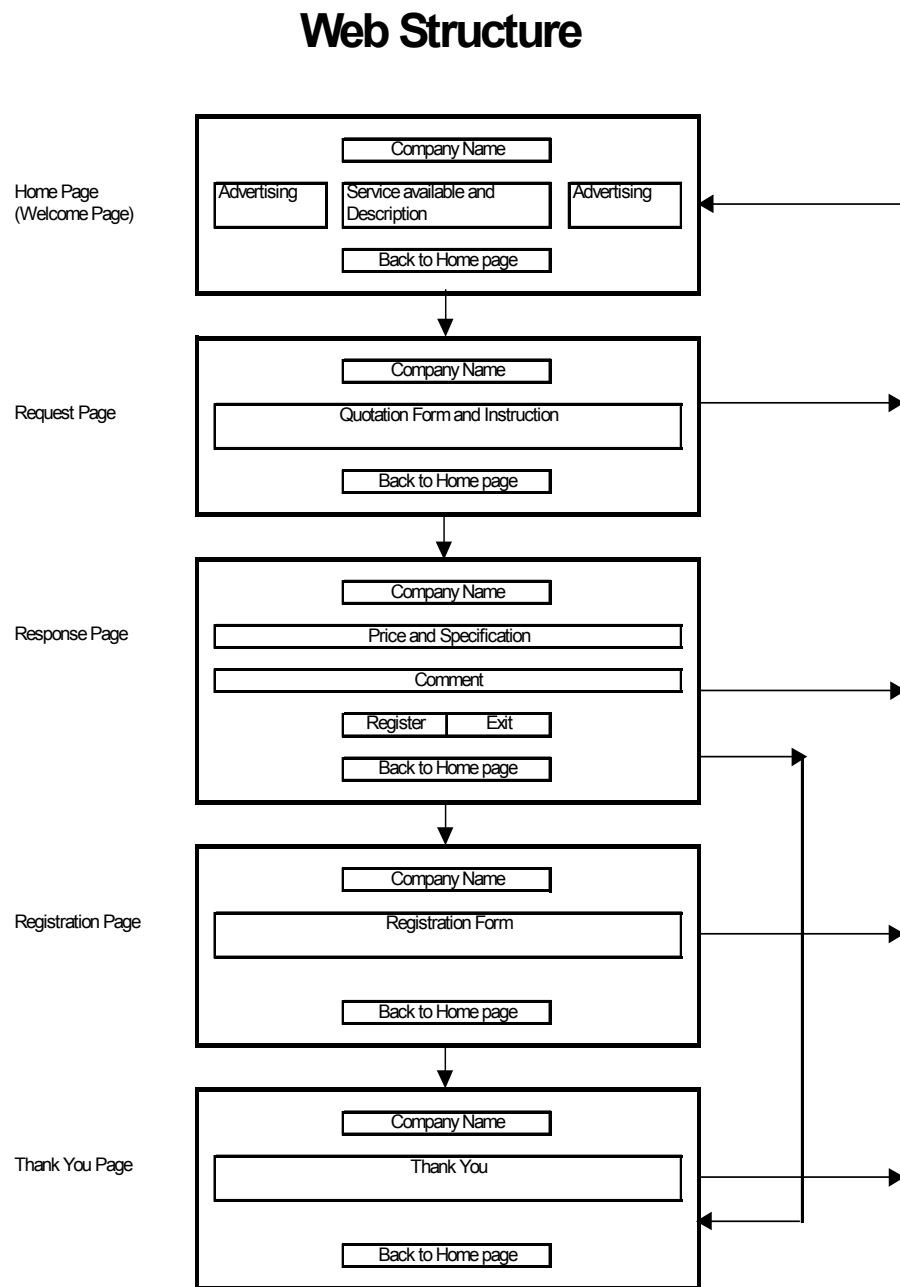


Figure 4-1 Web Structure of the e-Computer Price Quote System



## 4.4 Database

Unlike other e-business system, the e-Computer Price Quote system stores a customer's personal information, and product and quote information only **after** he/she feels the price quote is satisfactory and is willing to be contacted by the service provider. This saves not only computer manufactures' database space but also customers' time. Figure 4-2 shows the entity relationship diagram for the e-Computer Price Quote System. Table 4-1 shows the definition for each code.

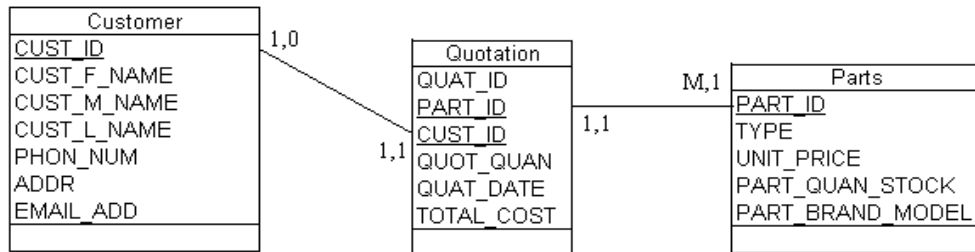


Figure 4-2 E-R Diagram for the e-Computer Price Quote System

Table 4-1 Definition of Code

Code	Definition
CUST_ID	Customer's ID #
CUST_F_NAME	Customer's first name
CUST_M_NAME	Customer's middle name
CUST_L_NAME	Customer's last name
PHON_NUM	Customer's phone #
ADDR	Customer's address
EMAIL_ADD	Customer's E-mail address
PART_ID	Part's ID #
TYPE	Type of part
UNIT_PRICE	The cost of price per one unit
PART_QUAN_STOCK	The quantity left in stock
PART_BRAND_MODEL	Specify the character of the part
QUAT_ID	Quotation table ID #
QUOT_QUAN	# of the part that customer is interested
QUAT_DATE	the day when quotation was written
TOTAL_COST	total cost for a particular part

Note: The relationships between the two entities are shown by (1,1),(M,1), etc. The closest combination (for entity *customer* (1,0)) is representing the relation that considers from the entity (customer) side.

## **5. Publications**

The e-Computer Price Quote will be designed with online help. There will be no manual for its ease of use. However, a cheat sheet on how to use it is provided at the time of its installation.

## **6. Packaging**

All the source codes will be presented in a hard copy as well as stored in a compact disk.

## **7. Installation**

The computer manufacture will have to purchase a license and agree its terms and conditions before using the e-Computer Price Quote system to conduct direct sales online. The licensed computer manufacture will be given a unique key to get into the system's web site online.

## **8. Product Support**

Full customer support after sales of the e-Computer Price Quote system is available from the software design team 24 hours a day, 7 days a week.

## **9. Future Functionality**

This project is to design a system that implements a portion of e-commerce. It can be further expanded to include the elements and functions of e-commerce to the full extent as illustrated in Figure 9-1.

## **10. Constraints/Tradeoff/Risks**

The e-Computer Price Quote system may have to be adjusted to adapt various programming languages and operating environments.

When applied to outside the states, the e-Computer Price Quote system may face culture shock so that its interface has to be redesigned.

The software design team has to keep track of the dramatic and fast progress of information technology.

# E-Commence Data-Flow Diagram

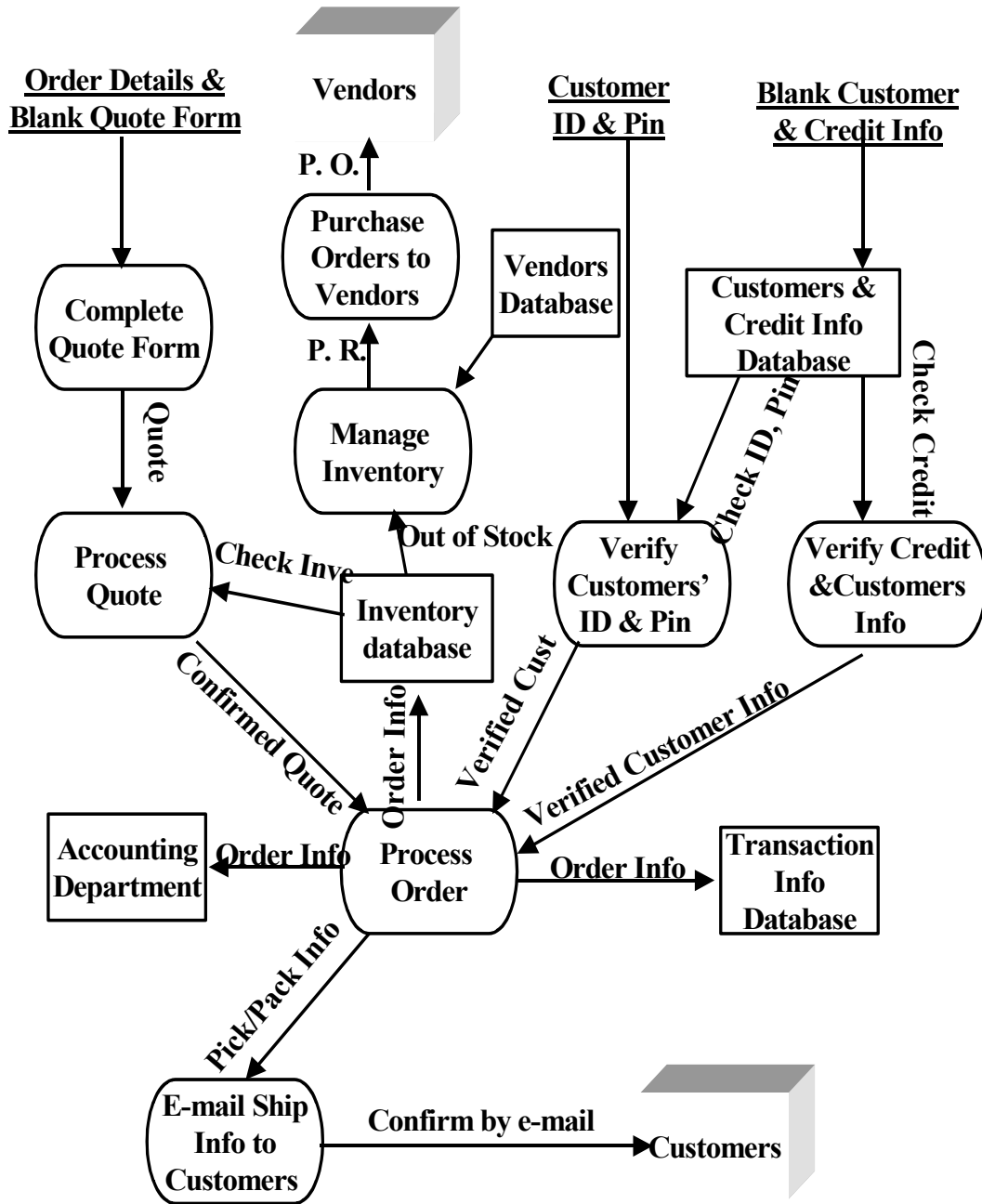


Figure 9-1 Data Flow Diagram for E-commerce