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Web based customer support in banking and financial services

Kevin C. D'Silva
Edith Cowan University

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Web based customer support in banking and financial services

by

Kevin Christopher D'Silva

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Abstract

As customers become more sophisticated and competition increases in the marketplace, companies need to provide better service to gain a competitive advantage. The World Wide Web (WWW) offers companies the opportunity to provide service to their customers 24 hours a day and 7 days a week. Companies are taking advantage of this opportunity by making the WWW the customer service tool of the future.

This project was conducted to develop a model for evaluating the level of customer service and support provided by corporate Web sites. The model was developed by adapting Lovelock's Flower of Service Model (1994) to Web based operations. Lovelock's model is based on the observation that most companies provide a core product or service but differentiate themselves on the supplementary services they offer. These supplementary services assist the customer in the pretransaction, transaction and posttransaction of the product or service.
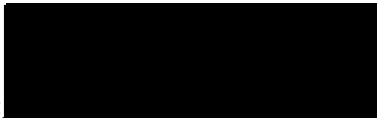
The model was applied to corporate Web sites of Australian banking and financial institutions. The results of the evaluation provided information on the level of customer support provided by each Web site. The customer support level scores derived from the evaluation provide companies with a tool for comparison of their own web sites with those of competitors and of the industry in general.

Declaration

"I certify that this thesis does not, to the best of my knowledge and belief:

(i)   *incorporate without acknowledgment any material previously submitted for a*

         degree or diploma in any institution for higher education;

(ii)   *contain any material previously published or written by another person except*

         where due reference is made in the text; or

(iii)   *contain any defamatory material.*

Signature: ███████████

Date: 13/11/98

Acknowledgments

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Introduction

This project examines the applications of the World Wide Web in supporting customers. The aim of this study is to develop and apply a model which will allow banks and financial institutions to evaluate their use of the World Wide Web for customer service and support

WWW-based customer support involves two areas: (1) the World Wide Web and (2) customer service and support. The WWW is a new communications channel allowing for 24-hour global access that facilitates the distribution all types of media such as text, pictures, graphics, sound and video. Customer service and support are interactions between a customer and the service provider to facilitate customer satisfaction in the product or service. The combination of the two, enables companies to extend their customer support function, making it timely and available to current and potential customers.

The Flower of Service Model developed by Christopher Lovelock (1994) provides a tool for identifying and evaluating the customer service function in organisations. The model describes how companies can gain a competitive advantage through supplementary service elements. There are many elements but they are categorised into eight groups: information, consultation, order-taking, hospitality, safekeeping, exceptions, billing and payment. Together these surround the company's core product or service in delivering quality customer service (Figure 1).
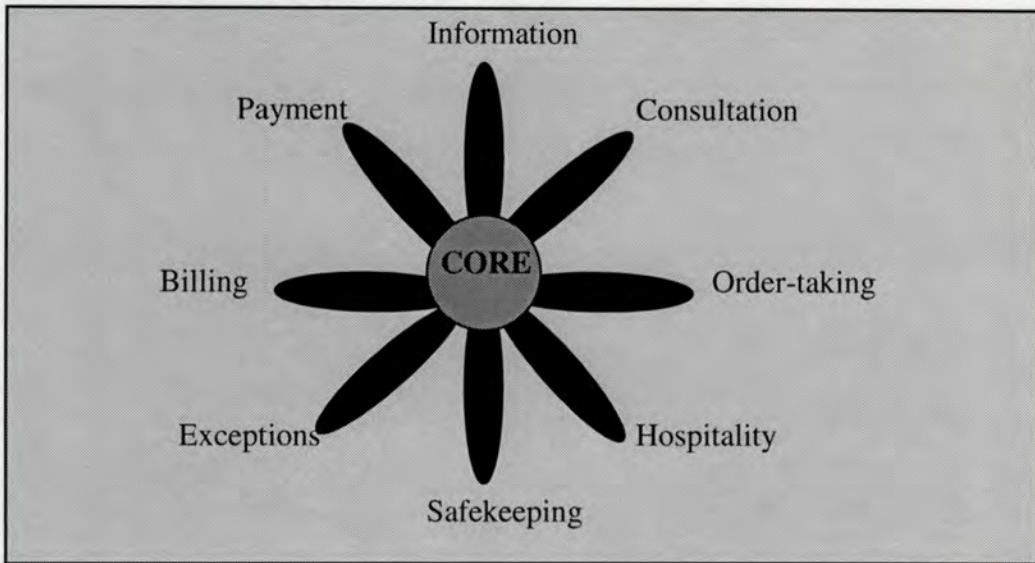
Figure 1: The Flower of Service, core product surrounded by clusters of

supplementary services.

In this study we will examine whether the Flower of Service Model can be applied to

Web based customer support. We will consider whether the adapted model can

provide a tool which companies can use in evaluating the Web based customer

support of themselves and their competitors. We will test the effectiveness of the Web

based customer service evaluation tool by applying it to a sample of Web sites

mounted by Australian financial services organisations.

Background

Customer service and support can be defined as a company assisting the consumer in

the pretransaction, transaction, and posttransaction of a product or service (Lovelock,

1996, p. 493). Organisations have been offering support and service to their customers

for many decades, in order to add value to their product or service. Banks have found

this highly important as poor quality customer service creates an increase in customer complaints and greater likelihood of a customer switching banks.

Banks and financial institutions offer many services, such as investments, insurance, personal and home loans, superannuation, and personal or commercial banking. The relationship between a bank and its customers requires a high level of trust on the part of the customer. Banks have used many different channels to promote customer service, for instance: toll-free telephone lines, customer service desks in the branch, educating and training of staff, educating of customers through printed materials and advertising, and internal organisational policies.

The advent of the World Wide Web (WWW) has brought about a new channel for banks and financial institutions to provide better customer service and support. As use of the WWW increases, banks and financial institutions need to be able to make the most effective use possible of Web based customer support.

Significance

The project draws its significance from its potential to assist banks and financial organisations to offer greater customer satisfaction, reduced expenses, personalization, and the use of latest information technologies. If the project were to be found successful and utilised, it would provide means and ways of improving customers' Web based transactions with the company.

In addition, it enables the company to reduce the costs of customer support, by allowing the customer to solve problems or queries using the company Web site.

Information archived onto the site offers consistent service to customers at a level which cannot be offered by a call-centre's customer service representative (CSR). For example if a customer wants to work out the best financial investment for their money. It could be accomplished by using financial calculators located on the corporate Web site.

The WWW is a two-way communication channel allowing for improved customer relations in gaining feedback from customers, helping the company to improve existing lines and ideas for new product development. Also, not only is there customer to service provider contact, but customer to customer contact providing an opportunity to create a strong online community, enabling the organisation to evoke customer loyalty to a higher level. Advances in technology and the tangibility of the Web allows opportunities to enhance customer support operations, such as: videoconferencing, multimedia training and virtual support representatives. Web based customer support strengthens the customer support function of the company by offering customer self-service solutions.

Purpose

The purpose of the project is to develop a model by which banks and financial services can evaluate customer service and support over the World Wide Web. There is a need to examine what banks and financial organisations are currently offering over the Web in terms of customer service and support and how they can use the Web for customer service and support in the future.

Literature Review

General Literature

During the mid 1980's there was an apparent paradigm shift as many companies moved away from competing on price and favoured competing on service. Organisations had a new goal and that was to achieve total quality service. Employees could add value to the product by offering superior customer service. For instance, an employee could sell a product for 25% more than the original price, if they offered good service, and the customer would be willing to pay, or the employee could reduce it by 25% and offer no service, and the customer would still be willing to pay. Clearly, the first option is more profitable and, hence the move to greater service levels occurs. This new initiative has brought about changes in employee attitudes and skills, need for analysis of customer responses and company structures (James, 1989, p. 50).

As a consequence, there has been a recent trend towards the use of 'total customer care' which provides another way for firms to differentiate themselves from their competitors. Total customer care means attending to customers' problems or queries in an efficient manner, using the latest technologies and customer information to offer higher quality service (Varney, 1996, p. 47).

The most widely adopted method in using technology to enhance customer service is the call-centre. A call-centre, also known as a response-centre, is where the customer calls via the telephone when they have problems or queries. The call centre is staffed by qualified customer service representatives (CSR) who locate solutions. Call-

centres are usually telephone-based, but computers are used to assist CSRs with finding solutions and locating customer details. Although, call-centres have been effective in providing better customer support, they have several drawbacks (Lovelock, 1996, p. 496).

- The variability in response; customers speak to different CSRs and get different answers depending on the CSR's expertise, which reduces the delivery of consistent service.

- The inability to capture feedback, as the CSR finds it hard to record responses while answering the customer's problem.

- The inability to manage demand. It is hard to predict when customers are going to call, so to ensure high quality service, managers must overstaff, which is very inefficient.

Before the Web, customer support was also available online. Companies would set up a text-based bulletin board system, which would enable customers to dial up to a network via computer and modem providing access to software updates, product information and be able to communicate with other product users (Keeler, 1995, p. 334). This method of customer support was widely adopted by the computer software and hardware industries such as Cisco Systems' Cisco Connection Online in 1992. One reason for the success of these online information services was that these companies manufacture a complex product creating a need for high levels of support.

The introduction of the World Wide Web in 1993 has brought new methods of customer support as multiple media elements can be distributed through it. The Web is able provide users with information quicker, interactively and in real-time. Also,

quality customer service and support is achieved by maintaining a high level of

presence to the consumer. The Web is available worldwide, twenty-four hours a day.

Web based Customer Support in Banking and Financial services

Since the beginning of 1994, many banks and financial services have been investing

in Web based operations. According to WWW.Consult's (1998) findings only 57% of

Australian banking and financial service companies have a corporate Web Site

(WWW.Consult, 1998, p. 25). Initially used mainly for brand imaging, recently use

has been extended to providing customer service and support. All of these companies

use their Web sites to provide information for customers. The more successful

companies are tailoring solutions for customers such as homebanking, financial

planning, asset management, bill payment and other services.

One company that is providing insurance and investment information on its Web site

is John Hancock, located in Boston. The aim of the site is to give people the tools to

educate themselves about their financial situation (Big names in investing, 1997, p.

47). In particular it offers an interactive element called 'portrait planning'. This

enables customers to establish their financial position, by developing their goals and

determining the appropriate investment/insurance vehicles to reach those goals. This

site is an example of how the Web can enhance customer service by providing an

interactive element. This kind of interaction has previously only been achieved by

personal consultation.

The creation of the Money University of America in November 1996, by Ric Edelman sparked a new way of using the Web to provide online financial advice to existing and potential customers (McCarthy, 1997, p. 62). The Money University allows customers to chat live with financial advisors on a range of topics such as taxes, financial planning, stock market, etc. This technique of using the Web allows for strong customer service, but it can cause problems if they're unqualified advisers dispensing inaccurate or misleading information.

Another example is provided by an Australian company using Web based technologies for customer support. In 1995, the Commonwealth Bank developed their Web site, providing a corporate image and information to current and prospective customers. Later, in early 1997 they launched banking capabilities over the Internet. Netbank, allows customers to check their account balances, to transfer funds and to pay bills. The Commonwealth bank saw that the new service would create a demand for increased customer support, so they diverted funds from advertising and promotion into it instead (Crowe, 1997). Despite better customer support by providing information and Internet banking, the Web site does not have the ability to enable online account set-up or loan applications.

Web based investment companies are becoming more accepted. Forrester Research predict that online investing will increase from US$100 million in 1996 to a projected US$600 million in 2001(Etrade, 1998, May 18). In April 1998, E*Trade Australia launched their Web site. This company offers online investing services. It provides financial information, management of a customer's portfolio and allows customers to make real-time order placements of investments. E*Trade Australia is a financial

institution that is using the Web effectively to provide customer support and service. It currently enables users both to find answers and perform transactions.

Customer Support Model

Based on the review of the recent literature in this topic Christopher Lovelock's Flower of Service Model is the most suitable one to lay the foundation for the investigation of WWW based customer support by banking and financial institutions.

Lovelock states that most organisations are offering their customers a package usually referred to as the augmented product. This comprises the core product/service and supplementary elements. For instance, the core service in banks is looking after a customer's money and some of the supplementary elements offered are advice on banking, waiting facilities, internet banking, etc. Viewing across the many industries the core product/service can become a commodity, hence a business can differentiate itself on supplementary services.
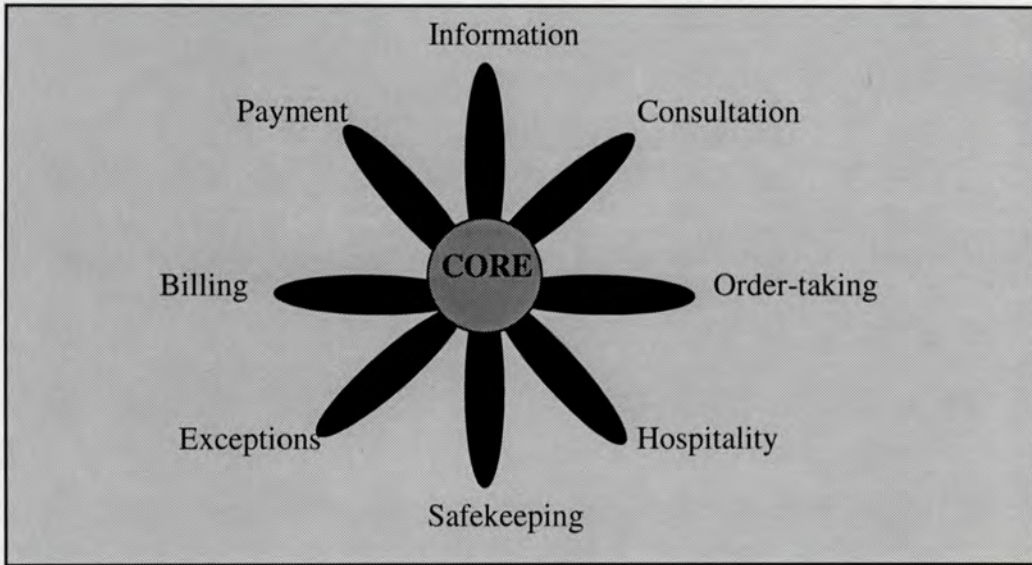
Figure 2: The Flower of Service Model.

There are a variety of supplementary services, but generally they fall into eight categories:

> Information   > Safekeeping

> Consultation   > Exceptions

> Order-taking   > Billing

> Hospitality   > Payment

1) **Information**

In order for customers to use a product or service, they need information, such as prices, warranties, directions, features, product literature, etc.

2) **Consultation**

This involves a form of communication to probe customer requirements and then develop a personalised solution. This can take the forms of advice, counseling, tutoring, training and technical consultancy.

3) **Order-taking**

Upon choosing the product, the company has ways to accept the order, such as applications, order-entry or reservations.

4) Hospitality

When a customer enters the service factory, there is the need to take care of them until the service delivery is complete. Examples include bedrooms, toilets, waiting facilities, food, etc.

5) Safekeeping

Customers visiting the service site may need assistance from the company to look after their possessions brought or purchased by them, such as security, child-care, car park, delivery, packaging, etc.

6) Exceptions

This involves a group of services that are outside normal service delivery. Examples of this are special requests, complaints, compliments, suggestions, problem solving and restitution.

7) Billing

Involves the form of the billing procedure such as verbal statements, invoices, monthly statements, etc.

8) Payment

On the creation of a bill, there is the need for payment, which can take many forms such as self-service, automatic deduction from bank account, or direct to a payee via cash, credit or cheque.

The eight categories combined form the flower of service (as seen in Figure 2) with each category acting as a petal, and the core product/service being the centre of the

flower. All of these supplementary services are seen as being under the umbrella of customer service and support.

Many of the eight petals are information-based. They involve information processing and they can be applied to information technology, particularly the World Wide Web. Even though the elements of hospitality and safekeeping involve physical objects, newly acquired supplementary services resulting from the Web such as user-friendliness, multi-lingual access and Internet security can fall into these categories.

Literature on Data Collection Methodology

The methodology for this study is based on performing a content analysis of Web sites in the Australian banking and financial services industry. The content analysis forms the basis of a scoring system for Web based customer support based on an adaptation of the Flower of Service Model.

Content Analysis

A content analysis can be defined as 'a research technique for making replicable and valid inferences from data to their context' (Krippendorff, 1980, p. 21). It is a research technique for providing knowledge, insights, and a practical tool for action. It has to be reliable and replicable, in that if another researcher applies the same technique to the same data, the results should be similar.

The framework behind developing a content analysis, involves six factors (Krippendorff, 1980, p. 26-27).

1) The *data* to be analysed must be made clear, how they are defined and from where they are to be drawn.

2) The *context*, relative to the data to be analysed must be established such as the timing, surrounding conditions and boundaries.

3) The *analyst's knowledge* determines the context, within which decisions are made.

4) The *target* of the analysis must be defined as to what the analyst wants to know.

5) To make *inferences* to the data and their context and justify them in terms of knowledge about the stable factors in the area of study.

6) The need to *validate* the results for a successful content analysis by providing evidence to ensure the results are accurate.

A content analysis of Web sites was conducted by Xavier Dreze and Fred Zufryden, to evaluate the effectiveness of promotional content on the Web, using the example of a Web based music store (Dreze & Zufryden, 1997, p. 90). The research methodology for this study was unobtrusive, timely, cost effective, free of random sampling and it was based directly on the Web. Data were collected by monitoring the click streams of users visiting sample Web sites. Examining the number of pages accessed and the time spent on each page was found to be useful in measuring the effectiveness of the sites. The study also considered attributes of the Web sites, including background, image size, sound and celebrity endorsement.

Another example of Web site content analysis was performed to develop a model of Web site design for marketing (Palmer & Griffith, 1998, p. 46). This was conducted on two hundred and fifty companies from the Fortune 500. It analysed the frequency of Web site technical characteristics and efforts in supporting marketing activities. The Web site features measured were multimedia use, Web site navigation, sales and delivery, promotional activities and product support. The results were used to place selected companies into four Web site models: (1) direct marketing to customers; (2) supporting existing channels; (3) retaining a Web presence; and (4) failing to capitalise on the Web.

A further study was conducted by Marcwick, Tamplin and Wanca (1997) to find out which industries are the earliest adopters of Web technologies. The study sample was on the Web sites of the Fortune 500 companies in 1995 and it involved the measuring of ten attributes. The attributes surveyed were access, e-mail, software downloads, animation, shockwave, sitemap, help, frames, video and Web surveys. The method involved the analysers measuring the frequency of these attributes on the sample companies' Web sites. The study found that the telecommunications, computer and electronic industries are the earliest adopters of Web technology.

A study on the Fortune 500 was conducted to identify ways US companies have acted towards the WWW and how they have used their Web sites for business (Liu, Arnett, Capella & Beatty, 1997, p. 336). The research methodology involved searching the Web and contacting the sample companies by telephone to establish if the company has a Web site and if it did, its location. In analysing the Web site the analyser measured its content and applications offered. The main conclusion found was that

corporate Web sites could be used to support customers in the presale, sale and post-sale of the business transaction.

A recent Australian study conducted by Costelllo and Tuchen involved identifying which Australian insurance companies are using the Internet and for what purposes (Costello & Tuchen, 1998, p. 154). The target sample was the 21 highest earning insurance companies in Australia, but only 18 had Web sites. The data collected included the features on the Web sites such as products/services, financial facts, search, help and frequently asked questions. The main conclusion found by the analysis was that Australian insurance companies are failing to exploit the opportunities of the Web by not using it for sales and thus creating an opportunity for offshore competitors to enter the market via online Internet services.

Research Questions

The objective of this study is to create a model for companies to assess the effectiveness of their corporate Web site in providing customer service and support. To achieve the stated objective there are several questions that must be addressed:

- How do banks and financial services use the World Wide Web for customer service and support?
- What are the current levels of customer service and support over the WWW in banking and financial services?
- Can the Flower of Service Model be applied to corporate Web sites?
- Can the Flower of Service Model provide a tool which companies can use to compare their Web sites with those of competitors?

Methodology

The method adopted for this study involved developing a model for the banking and financial services industry to use in assessing the effectiveness of corporate Web sites providing customer service and support. The model was applied to Australian banking and financial services' Web sites using content analysis. The study was carried out in three phases:

1. Design of the Model

Phase one required the design of a tool for companies to utilise when developing a site for Web based customer support. The tool is intended to assist companies in providing relevant content to the customer and gaining feedback from their interactions with the site. This information can then be used to improve the company's Web site, product or service. Lovelock's Flower of Service Model was adapted to Web based operations and applied to a sample of Australian banking and financial Web sites. The application of Lovelock's model to the Web environment is described in detail below.

2. Application of the Model

Applying the Web based Model to Web sites requires a set of criteria to be assessed in determining the level of customer support provided. The criteria used are based on the customer support elements of the Flower of Service Model. Each of the elements is categorised by its function: information, consultation, order-taking, hospitality, safekeeping, exceptions, billing and payment. The customer support functions are assigned a score according to the schedule set out below. The scores for the eight customer support functions are totalled to establish a customer support level for the corporate Web site.

3. Interpretation of the Results

A content analysis is used to apply the Web based model. Each Web site is evaluated against a checklist of features assigned to one of the eight customer support functions

and given a score based on the number of features present. The checklist is included as Appendix 2.

Literature on content analysis indicates that several criteria must be met for the analysis to be valid (Krippendorff, 1980, p. 26). These criteria and a description of how the content analysis is carried out in this study meets these criteria are given below.

Sample Data

The method for gaining the sample data was non-random and included the *Business Review Weekly's* Top 500 Australian profit earning companies in 1998, from the banking and financial services sector. The first twenty-six companies with a corporate Web site where chosen as the target sample. The Metacrawler (www.metacrawler.com) search engine was used to discover the location of the companies' Web sites.

Context

The context in which the content being analysed is presented must be preserved. In the case of the WWW where change is very rapid, the preservation of context is achieved by careful recording and capture of the Web sites at the time of the content analysis. To ensure comparability of context in this study, all analyses were conducted within a four week period. In addition all Web sites were viewed using the same hardware and software configuration. All Web sites were accessed at the same Internet connection speed.

Analyst's Knowledge

This study seeks to enhance the replicability of the results by minimizing dependence on the analyst's knowledge through careful recording of the evaluation criteria using a checklist and scoring table.

Target

The target of the analysis is to apply the Web based customer and service model to the sample and to establish the current levels of customer service and support in banking and financial services' Web sites.

Inferences

The study seeks to reduce the influence of inferential thinking by producing an analytical tool based on the objective criteria.

Validity

The model and methods of analysis employed in this study should allow similar results to be obtained if applied to the same sample by other researchers and should also be transferable to different samples.

Company

Corporate Web Site

Gather Customer Feedback

Personalization

Customer enters Web Site

Feedback

Payment
Information
Consultation

Billing
Core
Order-taking

Exceptions
Safekeeping
Hospitality

Market Intelligence

Company Objectives

Competitor

Customer Expectations

Customer

CONTENT

Web Site Enhancements and Refinements

WWW Service Quality
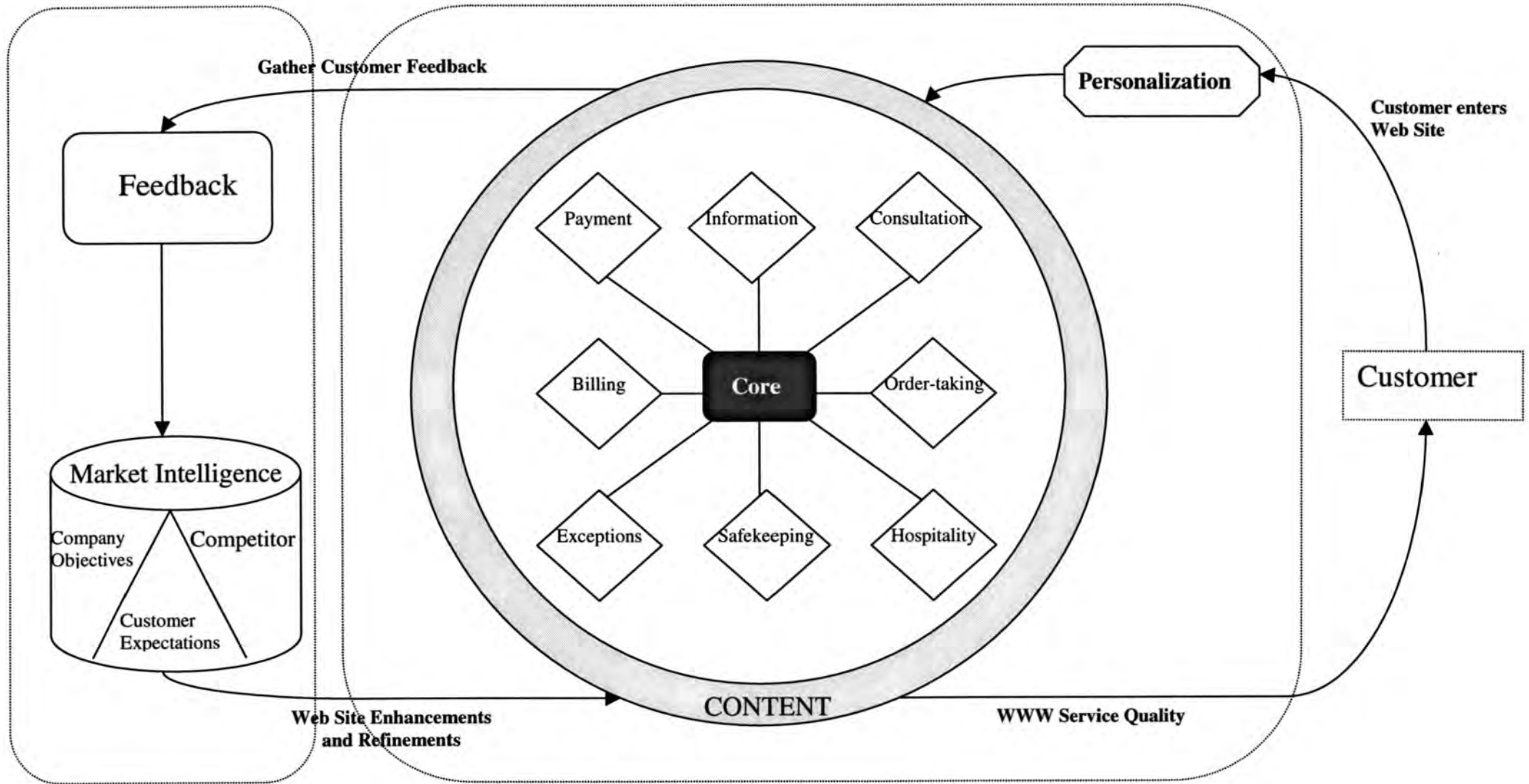
Figure 3: Web-based Customer Service and Support Model.

Web based Customer Service and Support Model

Providing customer service and support in the physical marketplace is different from providing it online. There are no physical processes between client and provider, but purely information processes. Lovelock's Flower of Service Model is an ideal method to implement customer service operations in an organisation. However, applying it to the Web requires adaptations, so it can be information based. Figure 3 shows the Web based customer service and support model and details the process of Web based transactions between the customer and company.

In developing the model it was apparent that there are five major stages involved with Web based transactions: the Customer, Personalization, Content, Feedback and Market Intelligence.

1. Customer

This first stage involves the customer entering the corporate Web site by a variety of means such as: advertisements and promotions, links from another Web site, a search engine or index, word of mouth or other miscellaneous sources. The customer, by either typing the company's URL into the Web browser or clicking onto its link, shows that he/she is already interested in the company's products and services.

2. Personalization

The personalization stage involves the customer customising his/her view of the Web site. Personalization involves two techniques, (1) pull by the customer and (2) push by the company. Pull by customers involves selecting options within the Web site of interest or organising the Web site content so it is relevant to them results in creating a customer profile. The customer profile is then stored in a database, so that when the customer next visits the Web site he/she receives a Web page that is tailored to his/her profile. For instance, a bank customer may only like to view the daily interest rates and market forecasts, rather than information on products and services. The customer creates a profile on the Web site by entering personal details and selecting the items to be viewed. The system generates a membership name and password to enter on the next visit. This is just one example of pull-personalization. Other examples include the customer choosing the interface layout, subscribing to newsgroups, a text-based Web site, a free homepage, weather updates, sports updates, etc.

The second technique of push-personalization involves the company providing information of interest to customers based on their profile. The company searches customer profiles and locates people with similar likes, dislikes, or matches a criterion. New products and services can then be promoted to clients within this group. For instance, a bank can arrange customers into groups depending on account balance type, such as student, standard and premium. Another example of push-personalization is the company noticing customers' viewing patterns and changing the Web site content to best suit the customers' needs. For instance, an investment Web site customer only views the mining shares and never looks at the industrial shares.

That client's view of the Web site can be customised so that it will not show the customer any more information on industrial shares and it will increase the amount of information on mining shares.

The Personalization stage may not occur on the customer's initial visit to the Web site. It may occur once the customer has found the Web site interesting and has created a customer profile.

3. Content

Companies offer a core product or service to customers but to create a competitive advantage many offer supplementary elements to enhance their core facilities. The content stage of the Flower of Service model encapsulates eight groups of supplementary elements which enhance customers' experience when seeking customer service and support.

All eight groups are considered to be important in delivering customer service and support. If one of the groups is not delivered well, it may reduce the overall service quality of the Web site. The eight supplementary groups are: information, consultation, order-taking, hospitality, safekeeping, exception, billing and payment. Each of these is explained below.

Information

Customers need information about the company's offerings before they can use them. The information component provides customers with information about the company and its products and services, such as company profile, product prices, conditions, warranties, etc. It also includes information on how customers can contact the company and extra documentation on products such as instructions, user manuals, or frequently asked questions. A final element is providing customers with confirmation of purchases if they have taken place, such as online receipts or email notifications. Information distributed via television, mail, radio, etc., is similar to the information posted on the company's Web site. Distributing the information through the Web site enables a variety of media to be used, interactivity and has a potentially greater audience than other media.

Consultation

Consultation involves the company recommending solutions or helping customers in finding a solution. Traditional methods of consultation involve face to face contact with the company or contact by telephone, where the company provides advice, counselling, training or technical consultancy. The Web builds on these traditional methods and creates new ones that cannot be established any other way. There are many forms of consultation such as emailing the company or filling in an online request form, triggering a response from the company by a telephone call or email. There are a variety of advanced consultation elements. One example is intelligent

agents that allow the customer to input his/her details into an online form. Information such as product type, price ranges, etc., are entered by the customer. The intelligent agent first gains information about the customers then searches the company's database and selects the products or services that match the customers' preferences. It creates a recommended list of solutions for the customer. Consultation includes elements of customer training. This can take the form of online tutorials where the customer follows examples of using the product. An enhanced element of Web based customer support is real-time advice, where the customer and customer service representative are communicating through audio/visual means to work together to find a solution.

Order-taking

When the customer is ready to make a purchase there is the need to have the order-taking supplementary elements available. These include applications such as ordering and reservations. The ordering process must be easy for customers to use. If it is difficult for the customer to place an order they can easily click onto a competitor's Web site, resulting in loss of business. Standard order-taking elements used are email orders, online application forms or telephone orders. More advanced elements are 'shopping carts' and personal accounts. The shopping cart acts the same way on the Web as it would in a grocery store, where customers place the products they want into it and when they have finished shopping they can view what they have before they pay.

Personal accounts are for customers who are frequent consumers of the product or service. They can order the product and credit it to their account in a single process. These personal accounts enable customers to see the current status of their order and history of orders made. Using reservation applications customers can reserve places for many areas such as restaurants, hotels, buses, airlines, car rentals, boats, etc., by filling in online reservation forms. The order-taking elements identified are similar to those of physical transactions. Instead of the customer filling in an online form they either go to the company or make a telephone call to make an order.

Hospitality

Hospitality involves looking after the customer and making sure they enjoy the delivery of the product or service. Traditional methods companies employ to provide hospitality are through such elements as waiting rooms, toilets, food, beverages, magazines and entertainment. These elements can increase satisfaction with the core product/service. Providing excellent hospitality on the Web is also important. Hospitality elements on the Web are navigation, interface design, user-friendliness, online help and community. Navigation involves the customer moving freely around the Web site, so they can go to any part of the Web site within a few clicks. An important element of navigation is the incorporation of a site map, that shows a map of the whole Web site and how it fits together. Interface design relates to the appearance of the screen, such as the use of attractive graphics and photographs, uncluttered content, one screen pages as opposed to one continuous page, uniformity of graphic headers, etc. Online help provides the customer with information on how to view and navigate around the Web site. The use of search engines for the Web site

guides and indexes provides additional help for customers. User-friendliness is important as it should allow the most novice Web user to view the information on the Web site easily. User-friendliness is the result of the overall impact of the elements of navigation, interface design and online help.

The community element seeks to create repeat Web site visits from customers. Examples of community building elements include newsletters, memberships and online communities. This final element allows people with similar likes and preferences to communicate with each other via email or in chat rooms.

Safekeeping

Safekeeping is traditionally the physical process of looking after customers' possessions. Companies provide customers with many safekeeping elements such as child-care, safes, security, parking, packaging, etc. On the Web this is extended to the safekeeping of information. Before customers start using the Web site for customer support, it is necessary for companies to provide security of the customers' information. Most customers do not want their personal information available to everyone. According to WWW.Consult's (1998) report on electronic commerce in Australia, the highest concern of companies enabling purchasing on the Internet is security (30%) followed by the company's concern for return on investment at (16%) (WWW.Consult, 1998, p. 16). Examples of safekeeping elements employed are the creation of usernames and passwords for customers and provision of information on the level of security that the Web site offers. Web sites that offer online transactions utilise more advanced security measures such as, firewalls, encryption and

authentication. The incorporation of the Secure Electronic Transaction (SET) protocol, which is a security standard designed for credit-card transactions over the Internet is a safekeeping function. SET encrypts credit card transactions over the Internet and authenticates the identity of sender and receiver.

Exceptions

Some customers experience problems or need special attention. The exceptions stage involves resolving these dilemmas. These dilemmas would normally be resolved by a customer calling customer service representatives or going to the company's physical location. However, on the Web customers' special requests in advance of the product or service delivery are received by email. The handling of complaints, suggestions and compliments is done by offering customers a virtual guestbook and online feedback forms to fill in. The customers' comments are sent to the company and are handled according to company's internal policies.

Customers' problems are often product or company related. If the problem is product related one way it could be solved is to have the customer use search engines and intelligent agents to find a product solution. A company related problem could be answered by providing a frequently asked questions (FAQ) database, which gathers all the questions mostly asked by customers and displays the answers to those questions.

Billing

This stage involves the billing of the customer. Many Web sites that do not offer Web based transaction facilities use other methods such as pay-before-use, telephone transactions, periodic account statements and invoices sent to the customer's home or email address. Web sites providing Web based transactions provide personalised customer accounts so customers can check current bills, previous bills and change account information. Using the Web for billing enables timeliness as customers get the bill immediately either in their email or on-screen and can pay for their purchase straight away. Billing methods traditionally range from verbal statements to periodic account statements. These vary depending on the type of product or service being used. For instance, at a shop the employee may just verbally tell the customer the cost of the products whereas some hotels display the customer's bill on the television screen.

Payment

Once the company has issued a bill there is the need for a payment method to be offered. Traditional methods are employed by some Web sites such as sending in a cheque or going to the physical store and paying for the product. The Web offers customers a variety of new and innovative payment methods, such as electronic funds transfer, credit cards and digital money. Electronic funds transfer (EFT) allows customers with Internet banking capabilities to transfer funds from their account to the company. Credit card payments operate by customers providing their credit card

details to the Web site. Credit card payments were the most popular according to WWW.Consult (1998) where credit cards were used 65% of the time for online payments followed by cheques at 13% and digital money at 4% (WWW.Consult, 1998, p. 17). The most recent payment method is digital money, which acts the same way as normal money, but is in electronic form. Customers gain the digital money from a vendor and spend it at Web sites that accept it. For example St George Bank has developed eCash that enables the customer and merchant to trade real time over the Web.

4. Feedback

During the customer's visit to the Web site there is a stage unseen by the customer. It involves gathering information about customers and their interactions. It is called the feedback stage. There are many methods used to monitor customers and extract valuable information from them which use either intrusive or non-intrusive methods. Feedback forms, online surveys and online registration are three intrusive methods. They ask the customer to provide information about themselves or their opinions of the company. The non-intrusive methods are interaction tracking and "cookies", these methods do not require the customer to do anything, as computer logs acquire the information. "Cookies" are small packets of information that remain on a customer's computer that provide information on the customer's identity, preferences or past behaviours. This information becomes available to the company who created it when the customer next visits the Web site. Interaction tracking consists of viewing the Web server logs of customer interactions with the Web site, specifically seeing the pages the customer visited and for how long.

The information gathered in the feedback stage is analysed by the company together with other factors to enhance the quality of the Web site.

5. Market Intelligence

The market intelligence stage is implemented by the company to analyse the information they have collected about customers in order to provide a better product or service to them. The information attained in the feedback stage is now analysed to refine and enhance the Web site. In analysing the information the company will identify individuals or groups interested in their product/service and areas of the Web site to improve or promote. Every time a customer enters the Web site the company's server records their visit, time spent, pages viewed, locations visited, etc. Through analysing these data the company can identify what types of people are looking at their Web site and respond accordingly with appropriate products or services. For instance, if many visitors are looking at the home loans area on a bank's Web site, the company can improve the quality of the information provided and set up an online community so that potential customers can interact with each other. This encourages customer loyalty and provides further opportunities for gathering customer knowledge.

The three factors taken into consideration while analysing the feedback are the company's objectives, customers' expectations and competitors' performance.

Company's Objectives

The Web site has to be in line with the objectives of the company as the Web site is an extension of the company. If the company focuses on service, so should the Web site. Objectives of customer-driven companies in providing quality service are to exceed customer's expectations, to anticipate their needs, as well as their potential problems or complaints and to improve company's services and products accordingly. (Lowenstein, 1997, p. 9).

Competitor's Performance

Companies enhancing their Web sites need to monitor direct and indirect competitors' Web sites. The performance of competitors can create customer expectations. As a company providing quality information and customer service tools could be seen by the customer as an industry standard. An example is Web sites providing search engines for a customer to find information. If a customer goes to a competitor's Web site to find information and there is no search engine he could become dissatisfied as expectations are not met.

Customer's Expectations

Customers have many expectations when they are about to use a product or service and these are derived from personal needs, previous experiences, experiences of other people, company image and the nature of the product or service. The company's

performance must match or exceed the customers' expectation in order to achieve a higher service quality. For instance if a customer has a query or problem the company should act promptly to resolve the issue.

Web based Customer Support Elements

In analysing the customer support levels of the Web sites eight customer support categories are identified. Within each of these eight categories there are numerous elements to examine. The following information will provide an overview of each element used in assessing the customer support function of each Web site.

The number located on the left-hand side of the elements refers to its score. The scores were developed according to the element's objective in providing customer support, starting from the Web site's basic functions to its more advanced functions. For example a basic support function is the corporate Web site providing contact details for the customer. An advanced function is an online customer account history. The more advanced the customer support functions are, the higher the Web site's customer support level. A breakdown of the scores is listed below.

Table 1: Scoring Scheme

Score	Customer Support Functions of Web Sites
1	**_Simple Functions_** The Web site provides little support for customers. Has none or one customer support functions in its category. An example is company address and phone number.
2	**_Basic Functions_** The Web site provides basic customer support, enough tools so the customer can perform transactions, eg., a detailed company profile. _Contains the_

	customer support functions in the previous score level and has one or more within its category.
3	**Satisfactory Functions** The customer has sufficient support on the Web site in performing transactions. Examples include information on products, online forms and sitemaps. *Contains the customer support functions in the previous score levels and has one or more within its category.*
4	**Above Satisfactory Functions** A high level of support is given to the customer at the Web site, extra support is given to improve the service delivery process for the customer. This includes online calculators, credit card transactions, etc. *Contains the customer support functions in the previous three score levels and has one or more within its category.*
5	**Advanced Functions** The highest customer support possible is provided to the customer, encouraging repeat Web site visits and customer loyalty. These functions mainly provide personalization, eg., user interface or personal account. *This contains the customer support functions of all scoring levels.*

Information

This category determines the level of information content within the company's Web site using the information elements it incorporates. The following is a list of elements that can be found on Web sites to provide information for the customer with the content analysis score for each.

1	**Contact**
	Providing information for customers on how to contact the company for enquiries or purchasing. This can be in the form of the company address, trading hours of the store, telephone and facsimile numbers or email address.
2	**Company Profile**
	This is information about the company such as its history, operations, objectives and goals, business environment and its employees.
3	**Products and Services**
	Information on the products and services offered by the company, detailing the features, benefits, costs, conditions and warranties.
4	**Frequently Asked Questions (FAQs)**
	By gathering information from customer interactions and expert answers from customer service representatives, a list is created to provide answers to customer's common questions. This list is published on the company's Web site to help customers in the presales (prices, conditions, support service, etc.) to post-sales (updates, troubleshooting, billing, etc.) experience.
	Technical and Non-technical Documentation
	Literature on the product or service of the company, such as user guides, instructions, pamphlets, brochures, journal articles, etc. The literature can either be in HTML form for the customer to read through their browser or Adobe

Acrobat PDF forms for the customer to print out and read. Figure 4 provides an example of the Commonwealth Bank using Adobe PDF forms to distribute their annual report.

Figure 4: Commonwealth Bank's Annual Report in Adobe PDF form. Available WWW: http://www.commbank.com.au/Today/ShareHolderInfo/ AnnualReport/Report98/DEF-AnnualReport.htm (1998, September 18).

5 Client History

This involves the Web site having a record of the customer and his activities when they last visited the Web site, such as St George Bank's Internet banking which provides customers with information on their banking activities, including account balances, status of bill payments, term deposits, previous transactions,

etc.

Consultation

Consultation on the Web site involves the company providing tools for the customer to solve their own problems or to contact the company for more help. Below is a list of elements often found on the Web site to accomplish this.

1	**None**
	No elements of consultation on the company's Web site, such as email address or company's telephone number.
2	**Email Contact**
	This is the most optimal form of communication between the customer and company as it is accessible and easy to use. The customer can send in a query and expect to receive a response within 24-hours.
3	**Forms**
	Forms enable customers to categorise the query or problem and input the necessary information so a precise response can be sent. As many customers do not provide enough information, the form creates fields which encourage customers to type in the required information. See example Figure 5 of GIO Australia's form.

Tell GIO...

Let us know what you really think! What's good? What's bad? What can be improved? added? or changed? The on-going usefulness of our information resources really does depend on the feedback you supply!

Your Name: [   ]
Your E-Mail: [   ]

Please select just ONE of these boxes:
Is your feedback in relation to: ○ GIO's Web Site
or one of our product areas
○ Car Insurance ○ Home Insurance ○ CTP Insurance
○ Business Insurance ○ Financial Planning ○ Home Loans
○ Commercial Loans ○ Share Information ○ other

Subject heading for your feedback: [   ]

Detailed comments:
[   ]

[Add my Feedback] [Reset]

Figure 5: GIO Australia's Information form.

Available WWW: http://www.gio.com.au/feedback/index.html (1998,

September 18).

4   Intelligent Agents

These are software programs within the Web site that process queries and return

replies to the customer.

For example, if the customer is looking for a personal loan, he selects options

from the menu provided which are then processed to provide a list of loan

options suitable for the customer. This is accomplished by the Intelligent Agent

checking for correctness and completeness then filtering through the volumes of

data to match information with the customers. An example in Figure 6 is an

intelligent agent used in Cisco Systems Web site for configuring products.

Commerce Agents

Configuration Agent

CISCO SYSTEMS

| HOME | WHAT'S NEW | LOGIN | REGISTER | FEEDBACK | SITE MAP | SEARCH | HELP |

This Agent provides multiple ways to select a product to search for Cisco products which are configurable choose a particular model, and configure it.

View Configurable Models by Product Family

Product family: AGS+ Spares ▼

[View]

or

Search for Configurable Products by Product Description

Description or fragment (e.g., ATM or CABLE): [ ] Search

or

Search for Configurable Products by Product Number

Product number or fragment (e.g., 2501 or MEM-): [ ] Search

Figure 6: Cisco Systems Configuration Agent.

Available WWW: http://www.cisco.com/pcgi-bin/front.x/config_root.pl (1998,

September 18).

Tutoring/Training

The Web allows for rich content such as animation, graphics, video, audio and

text providing opportunities for customer tutoring and training. Various types of

training can be provided such as multimedia demonstrations, interactive guides,

multiple choice tests, etc. An example on the National Mutual Funds Management (www.nmfm.com.au) Web site offers customers the opportunity to undertake a Financial Planning Principles and Practice course through the Web.

Web Calculators

Companies use this element to assist customers in choosing the type of loan or bank account that would suit them. For instance Adelaide Bank provides customers with a Home Loan simulator that enables customers to see how much they can borrow and how long it will take to pay back the loan. The simulator provides graphs for the customer so they can see a graphical representation, as seen in Figure 7.
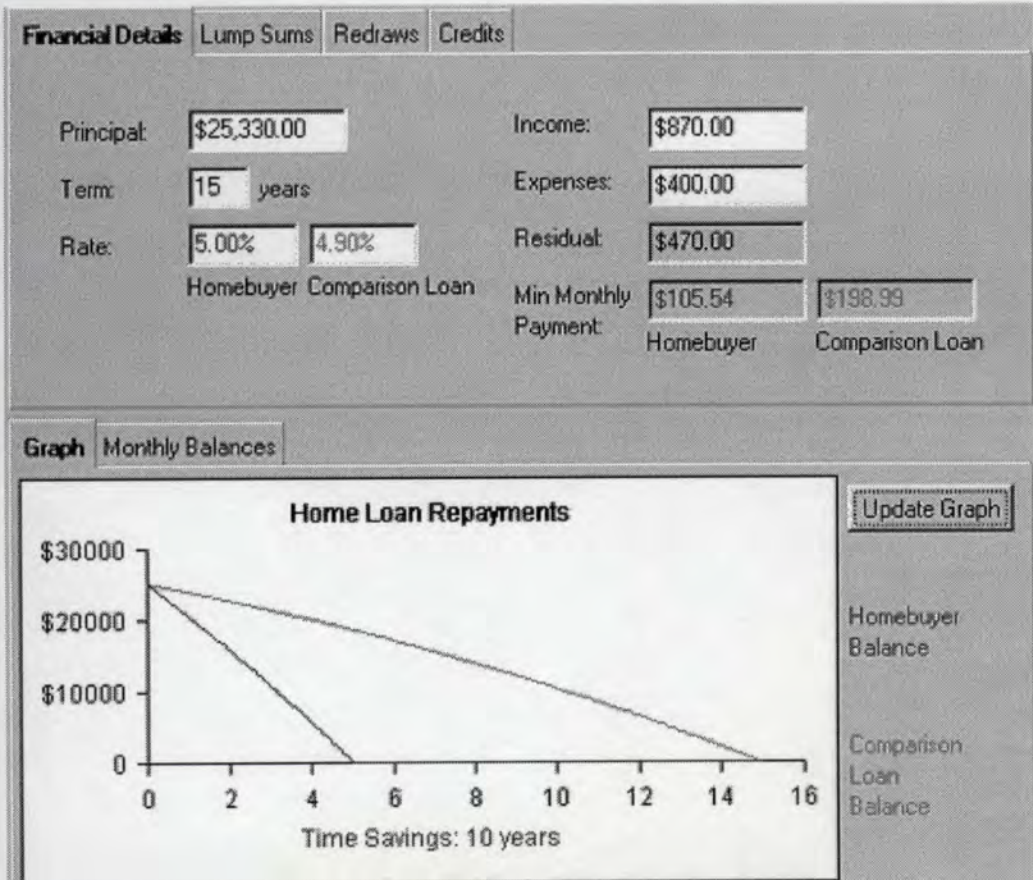
Figure 7: Adelaide Bank's Online home loan simulator.

Available WWW: http://www.adelaidebank.com.au (1998, September 18).

5   Real-time Advice or Training

This involves real-time visual/audio collaboration between the online customer and customer service representative. Customers do not have to wait for email replies or use a telephone to call the company, all they do is push a 'talk to a live Customer Service Representative' button on the Web site. An example of this element is provided by a company called Sitebridge that offers real-time chat and visual images. Figure 8 shows the customer contacting and sending a message to an online CSR and Figure 9 shows the online CSR replying to the message in real-time.
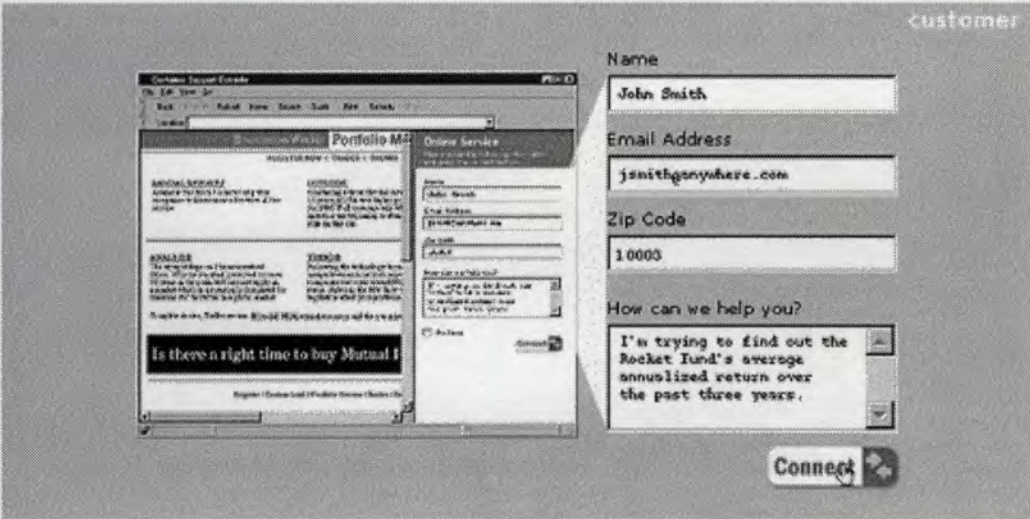
Figure 8: A customer sending a message to the company.

Figure 9: An online CSR replying to a customer's message.

Available WWW: http://www.sitebdridge.com (1998, September 18).

Order-taking

Providing easy access to order-taking elements such as application or booking forms can speed up the delivery of the service or product. The following order-taking elements can be provided to assist customers in this process.

---

1 **None**

Customers have to visit the physical store to make an order, as there are no ways provided on the Web site.

Email Order

The customer sends an email to the company in order to place an order.

| 2 | **Application/Order Forms**

These are traditional forms where the customer enters their details into the application form and then sends it into the company by post. The forms can be downloaded from the company's Web site and then printed out on the customer's computer. The forms are normally available in Adobe PDF or Microsoft Word format.

Telephone Number

A toll-free telephone number is displayed on the Web site so the customer can telephone the company to place an order.

| 3 | **Online Application/Order Forms**

These forms act the same way as traditional forms, but they can be filled in and sent through the Web. There is no need for the downloading, printing and posting of the application form. The forms let customers provide information such as, name, address, email and payment method. Figure 10 shows a Westpac Bank online home loan application form.

Figure 10: Westpac Bank's Online application forms.

Available WWW: http://www.westpac.com.au (1998, September 18).

Online Reservation Forms

For customers who need to make reservations for a service, an online

reservation form makes it very convenient and simple. Reservations can be

made for restaurants, hotels, car hire, airlines, etc. Customers need to enter

information such as personal details, the date and time of the service, type of

service, etc. An example of an online reservation form is available at

Travel.Com's Web site. It allows customers to make an airline reservation

(Figure 11).

travel.com.au the travel specialists   about us | email | join and save
Tel: 02) 9290 1500 Fax: 02) 9262 3525

airfares | book here!! | hotels | car hire | insurance | packages ⟩ home

Please enter the following information:

Departure City	PERTH [PER]
Destination City	ATLANTA [ATL]
Travel Class	FIRST [P]
Fare Type	RETURN ONE WAY AROUND THE WORLD CIRCLE PACIFIC EUROPE AIR PASSES US AIR PASSES
Departure Date	23 Oct
Return Date	30 Oct

Figure 11: Airline reservation form.

Available WWW: http://www.travel.com.au (1998, September 18).

Online Booking Forms

These are online forms used to make an appointment with a company

representative. An example, located on Westpac Bank's Web site allows

customers to arrange an appointment (Figure 12).

Contact Us

Schedule an Appointment with a Business Banker

NOTE: Appointments are available to Australian Residents Only.

Which Business Product/Service(s) are you interested in?

☐ Transaction Accounts	☐ Agribusiness Services
☐ Business Cashflow	☐ Merchant Services
☐ Business Finance	☐ Staff Superannuation
☐ International Services	☐ Payroll Services
☐ Franchising Specialist	☐ Don't know

Annual Turnover of my business

○ Less than $ 500,000
○ $ 500,000 - $ 1,000,000
○ $ 1,000,000 - $ 5,000,000
○ More than $ 5,000,000

Company Name

When would you prefer to meet?

Time of day

Day of Week

Figure 12: Westpac Bank's Customer Booking form.

Available WWW: http://www.westpac.com.au (1998, September 18).

4   Ordering Guide

This is to take the customer step by step through the ordering process from
choosing the product or service to the method of payment. These are utilised by
companies who have complex products/services or they are provided to assist
new users to the Web site.

Shopping Cart

This is a software program used to process customer orders for products such as software, books, articles, compact discs, etc. The customer browses through the Web site and examines the different products and service offerings. When they find something they want they can place it into the shopping cart by clicking a button. Once the user has finished shopping and is ready to pay, the customer can view the items and their costs in the shopping cart. Figure 13 provides an example of a shopping cart used at Amazon.Com' Web site.

Shopping Cart

Items in your Shopping Cart:

| Proceed to Checkout | Books Home | Music Home |

Quantity and Title Information:

Available immediately

| 1 | *Total Customer Service : The Ultimate Weapon*, By William H. Davidow, Bro Uttal ;
Paperback
List: $13.00 ~ Our Price: $10.40 ~ You Save: $2.60 (20%) |
| 1 | *HTML 4 for the World Wide Web: Visual QuickStart Guide*, By Elizabeth Castro ;
Paperback
List: $17.95 ~ Our Price: $14.36 ~ You Save: $3.59 (20%) |

Please press this button if you [Changed Quantities] of any items in your shopping cart. If you don't press it, your changes won't "stick." You can set the quantity to 0 (zero) to delete an item from your cart.

| Proceed to Checkout |

Figure 13: Amazon.Com's shopping cart.

Available WWW: http://www.amazon.com (1998, September 18).

5   Personal Order

A personal account is available for repeat customers or members to use when they want to order a product or service.

Hospitality

Hospitality is traditionally a physical process in the marketplace that endeavours to make the customer's stay at the company as comfortable as possible. Examples of hospitality include providing toilets, waiting rooms, etc. Although on the Web there are no physical processes, the principle is still the same. Hospitality is established by providing an attractive and user-friendly Web site. Below is a list of hospitality elements often found on Web sites.

1   **Ambiguous/Unstructured Content**

The information on the Web site has little structure, information on a specific topic is hard to find. A Web site of this type would have no index or contents page and the customer would have to try and locate the information by trial and error.

Text-based

The Web site is purely text-based containing no graphics or images, providing an unattractive presentation of the content.

2   **Navigational Interface**

Navigation is a critical element as it is important that customers know where they are on the Web site and how to move around. The components of navigation vary between Web sites, but all have similar features, such as frames, image maps and links to various pages in the site including the home page. Figure 14 below shows typical navigational elements.
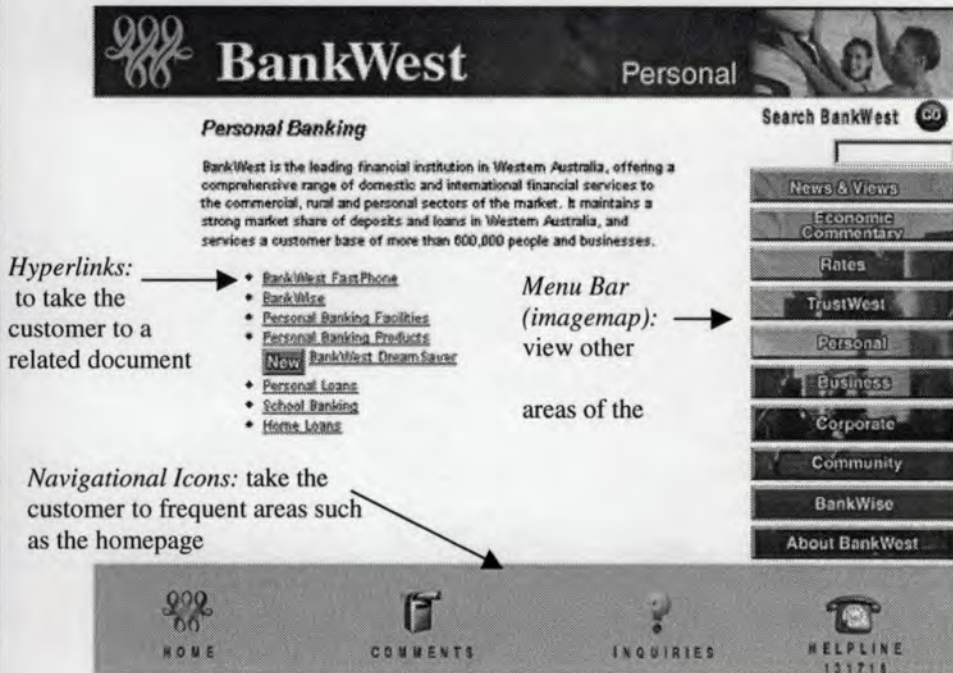
Figure 14: User Interface of Bankwest's Web site.

Available WWW: http://www.bankwest.com.au (1998, September 18).

Rich Content

The overall look of the Web site is an important element in the hospitality category. The Web site needs to be attractive so customers will enjoy visiting. The methods used to provide rich content combine multiple media elements such as, graphics, photographs, animation, sound and video.

3 **Metaphorical Navigational Interface**

This type of navigation involves using icons to represent the topic areas of the Web site, so customers will be able to move around the Web site easily and efficiently.

Structured Content

Information can be found more easily if it is well structured. This element is directly related to Navigation as both of them work together in providing accessible information. A site map provides the best view of the overall structure of the Web site.

Help Guides

Customers who are novice Web users are not familiar with the jargon associated with Web sites, such as navigation, search engines, icons, etc., may need a help guide. The help guide contains information to assist customers to use the Web site efficiently, such as how to navigate, the meaning of symbols, the type of Web browser to use, etc. The Commonwealth Bank's Web site is an example of online help as seen in Figure 15.

Help

Symbols

Navigation

Technology

Forms

Calling From
Outside
Australia

Other
Information

Which Bank
Finder

Welcome to the Help Desk of the Commonwealth Bank's World Wide Web site. My name is Jody. I'm here to help you navigate our site.

We have introduced several different areas that will assist you in finding the information you require. These areas of the Help section are listed in a menu at the left of the screen. Throughout the site there are menus like this. These relate to specific areas in each section. To select one simply click on it using your mouse.

Because navigation is so easy with the new page structure, it will not be necessary to use the BACK button on your browser.

In fact, because we have used frames to build the pages, you will find that you may need to select it several times just to get back to the last page you used. We recommend instead that you follow our navigation system - it's been designed with your needs in mind!

Banking for You   Insurance   Investing   Super   Your Home

Figure 15: Commonwealth Bank's Online help.

Available WWW: http://www.commbank.com.au/Guides/Help (1998, September 18).

Search

Search engines are used to locate information within a Web site. The customer types a query into the text field and the search engine filters through all the information to return results matching the customer's query. Below is an example of a search engine used in Colonial Bank's Web site.

Figure 16: Colonial Bank's search engine.

Available WWW: http://www.colonial.com.au/frame.asp?url=search (1998, September 18).

Glossary

A glossary is an alphabetical list of technical terms, intended to help the customer understand all the information contained within the Web site.

Sitemap

A sitemap provides a visual representation of the whole Web site, allowing customers to see all the information contained within. Customers can see where they have been and go to other areas through the site map. Figure 17 shows the sitemap of QBE Insurance.
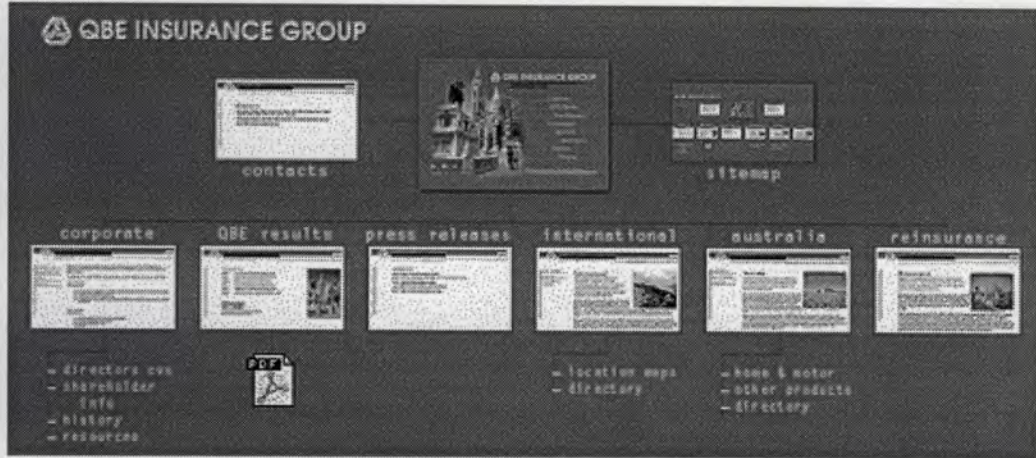
Figure 17: The Sitemap of QBE Insurance.

Available WWW: http://www.qbe.com.au/sitemap.html (1998, September 18).

Links

The Links page allows customers to got other Web sites related to the current one or other Web sites of interest. For instance a Web based music store could provide links to artists' Web sites.

4   User's Connection Speed

This is an option located at the beginning of a company's Web site or in the home page, which allows customers to choose the transmission speed they want to accept. For instance, customers who have a slow Internet connection speed will choose a transmission mode with less graphics.

What's New

This can be either a daily or weekly update of what is happening in the industry or company.

Online Community

An online community is made up of members who add their information onto a basic environment provided by the online community company. Members are people with similar views and tastes who have come together through using the company's product/service. Members communicate via online chat and exchange their views and opinions about a particular matter.

Periodic Newsletters/Magazines

Online newsletters or magazines produced by the company allow customers to gather a better insight into the company and issues concerning the industry. For instance, Suncorp-Metway provides an online magazine called Metway Life that provides information on lifestyles, renovations and real estate.

Member's Area

Exclusive information contained on Web sites can usually be found in the member's area. This area provides members with a variety of extra benefits such as financial investment information, special rates, etc. Mercantile Mutual has an area called MercAdviser (www.mercadviser.com.au), which is only available for financial advisers.

Languages

As the Web sites are available in all parts of the world, making information available in several languages can be a valuable service.

5	**Personalised User Interface**
	The customer is able to personalise the look of the Web site according to his/her tastes. For instance, Microsoft Hotmail (www.hotmail.com) is an email service for customers where the customer can modify the appearance of the screen, including the icons, background colours, navigation, email preferences, etc.

Safekeeping

Safekeeping has been referred to as safeguarding customer's possessions at the physical marketplace. On the Web it serves to protect the customer's information. Web site and information securities are important issues and it is vital that companies utilise appropriate methods to protect valuable information. The following list of elements provides an overview of the safekeeping methods used in Web sites.

1	**No Security Measures Shown**
	The Web site has shown no sign of security measures, enabling any person to gain access to a customer's information when sent over the Web.

2	**Information on Web Site Security**
	The company provides information to customers on the security measures it has in place for customer information. The information provided is about new security technologies, glossary of terms, security FAQs and other security issues. An example is the Commonwealth Bank's Web site explaining the various security measures it takes for its Internet banking facility, see Figure 18.

Security

Introduction to Security

Security Precautions

On Screen Keypad

Evaluation

Secure Session

Cryptography

Registration

Hashing

Viruses

Security FAQ

The Commonwealth Bank of Australia takes the protection of customers, their information and transaction instructions seriously.

Discussions on recent publicity regarding Internet banking and encryption technology can be found here.

As part of maintaining the highest level of customer service, the Commonwealth Bank has implemented system security controls, encryption of sensitive data and regular security reviews. These practices are carried forward into NetBank.

Recognising that your busy schedule may not allow you to devote time and energy to study computer security, the Commonwealth Bank's own security team has worked closely on the NetBank project.

The Commonwealth Bank is making sure that the standard of security of our Internet services is as high as it is in all other aspects of our operations.

Some specific techniques which the Commonwealth Bank is using include:

% ⓘ ⓠ   Guided Tour   Apply   Install   Security   Start   Support Centre

Figure 18: Commonwealth Bank's Information Security Overview.

Available WWW: http://www.commbank.com.au/Netbank/Security (1998, September 18).

3   User Authorisation

This is a security method to verify that customers are who they say they are. Usernames and passwords are a basic example of allowing customers access to sensitive information. When the customer clicks onto a certain area of the Web site they are prompted by a dialog box requesting a username and password. If the details are correct the customer continues, but if they are wrong, access to the information is denied. An example of user authorisation is on the MercAdviser Web site as seen in Figure 19.

MercAdviser

Welcome to MercAdviser, a finalist in the Best Financial Site category of the Australian Financial Review/Telstra Internet Awards 1998.

MercAdviser is a service for financial advisers only.

To proceed to the main site, please enter your e-mail address and password and click on Submit.

E-mail:

Password:

Forgot your password? Enter your e-mail address, check here ▣ and click on Submit. We'll e-mail it to you immediately.

You don't have a password? If you are an adviser simply enter your e-mail address, check here ▣ and click on Submit.

Submit   Clear

Figure 19: The MercAdviser Web Site, controlled access.

Available WWW: http://www.mercadviser.com.au (1998, September 18).

4   Firewalls

A firewall creates a barrier between a company's internal network and the external Internet. It should be secure from intruders but allow authorised internal users access to both networks. The firewall provides a single checkpoint for connections to go through so that they can be examined and verified. The firewall is best placed between the gateway point of the internal network and Internet.

Data Encryption

This is used in many security measures to protect the customers' and company's information. Data encryption is a process of making information (text, graphics, audio or video) unreadable to people without a decoding key. The most widely used encryption method is called Public-key encryption, which uses two keys, one to encrypt the message and the second to decrypt the message (Kalakota & Whinston, 1998, p. 140). Both keys are related so only one key can encrypt the message and only the other key can decrypt the message. Each party has two keys, one public-key which can be made available to any person and one private-key which must be kept secret. If a person wants to a send an encrypted message to another they must look up that person's public key to encrypt the message. To decrypt the message the receiver must use their private key. Figure 20 shows an illustration of how Public-key encryption works.
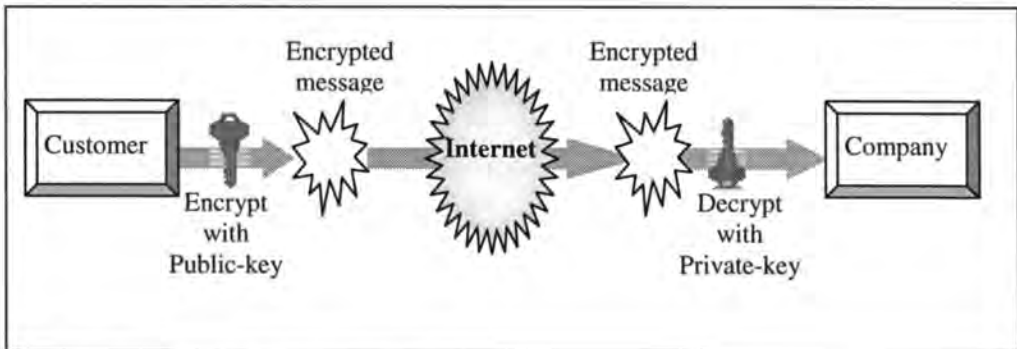
Figure 20: Public-key encryption.

Secure Socket Layers

Information is sent over the Internet through connections called sockets. Popular Web browsers such as Netscape Navigator and Microsoft's Internet Explorer have implemented secure sockets. These sockets encrypt information and

decrypt information when sent over the Internet.

5 Digital Signatures

A digital signature is a method of identifying a person on the Internet, similar to a normal hand-written signature, but not a scanned image of a person's signature. Digital signatures use public-key encryption to identify the author and contents of the message (Kalakota & Whinston, 1998, p. 141). For instance a digital signature is produced by imprinting a person's message with their private key. The receiving party would use the sender's public key to verify the source of the message before decrypting the message with the private key.

Secure Electronic Transaction Protocol

The Secure Electronic Transaction (SET) protocol is a security standard designed for credit-card transactions over the Internet, pioneered by credit card companies such as VISA and MasterCard. SET encrypts credit card transactions over the Internet and authenticates the identity of sender and receiver.

Exceptions

Resolving the customer's problems or queries can be a time-consuming task for a company's customer service representative, so companies have placed self-service solutions for customers on their Web site. Exceptions embodies helping the customer or improving the product/service at their request. The list of exceptions elements used on Web sites is contained below.

1	**Email**
	An email contact is provided on the Web site for customers who have a special query or request they would like resolved.
2	**Guestbook**
	The guestbook is provided on Web sites for customers to leave comments about it for others to see. Customers to provide their name, email address, personal homepage, location and special comments. The guestbook normally displays the most recent entries first.
	Feedback Forms
	These are forms provided to the customer to send in their comments about the company's Web site, products or services. These forms are quite simple in nature just asking the customer for their name, email address and comments. Normally the form also asks customers if they would like to be on the email list for information on new products or market changes.

3	**Special Requests**
	This form is used when customers are about to have the product or service delivered. For instance a customer making an online booking for an airline can make a special request before they go on the flight such as a vegetarian meal, window seat, etc.
	Complaint/Compliment/Suggestion
	These forms are often aggregated into one, where the customer checks the box on the form to describe if the comment is a complaint, compliment or suggestion.
4	**Troubleshooting Tools**
	These are tools placed on the Web site to help the customer solve problems with the product or service after it has been delivered. The various problem-solving tools are search engines, frequently asked questions, intelligent agents and online training. In some cases where the information on the Web site does not help the customer, he can email the company or fill in a feedback form.
5	**Trouble-Tickets**
	When a customer encounters a problem or query and cannot find the answer on the Web site, he/she either sends an email message or fills in the details on an online form. Once the message has been sent the company provides the customer with a trouble-ticket. With the trouble-ticket, a customer can go onto the company's Web site and check the resolution status of the problem.

Billing

Billing ranges from a verbal statement from the service provider to automatic account deduction. The list below covers the various billing methods used in Web sites.

1	**None** There is no billing function available on the Web site.
2	**Self-Billing** This is a simple form of billing where the customer totals the amount of an order and sends in the payment to the company.
3	**Invoice** The company sends an invoice to the customer's house or email address. The invoice will include different information depending on the good. Generally the criteria are, the product or service used, the quantity used, methods of payment, etc. **Periodic Statements** Periodic statements are sent to customers at regular intervals such as weekly, monthly, quarterly or annually. These statements accumulate the costs of the product or service usage by the customer and send it as one bill. They can be sent to the customer by post or email, depending on the customer's preference.

4 **On-Screen Display**

This refers to a customer's bill being displayed on the screen once they have ordered a product or service. For example a customer purchasing a book from an online bookstore is able to view the account on the screen, print it if paying by mail or enter credit card details if paying online.

5 **Online Personal Account**

An online personal account helps the customer and company to ensure that the customer's details are up to date and accurate. The customer can view dealings with the company such as current and previous transactions, personal information, pricing plans, subscriptions, promotions, discounts, etc. The online account can also be modified by the customer and includes changing the account type, pricing plan, personal information or payment method. Figure 21 provides an example of St George's online personal account screen.
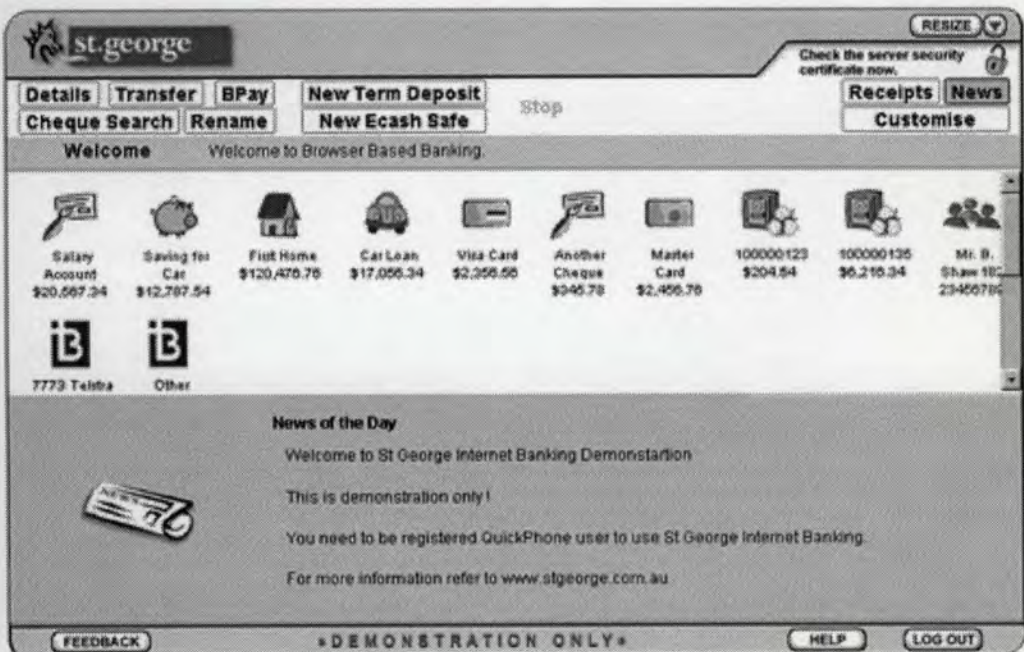
Figure 21: St George Bank's Online customer accounts.

Available WWW: http://www.stgeorge.com.au (1998, September 18).

Payment

The World Wide Web has used technology to improve on payment methods by enabling new innovations such as online credit card transactions, electronic funds transfer, electronic cash, etc. Companies still allow customers to pay through traditional methods such as cash or cheque but these new technologies allow greater efficiency in the service delivery. Below is a list of elements used in Web sites for payment.

1	**None**
	There is no payment function available on the Web site.
2	**Cash/Cheque**
	The customer pays for the product or service by going to the physical store to pay in cash or cheque, otherwise posts a cheque.
	Credit Card
	The credit card can be used to pay for the goods either by going to the physical store or through providing their credit card details over the telephone to the company.

3	**Credit Card (Online)**
	Customers pay for goods over the Internet through using a credit card. The customer enters credit card details into an online form that is then sent to the company. The use of the SET protocol enables these transactions to be secure and free from intrusion. Below is an example of Netscape General Store providing online credit card payment facilities. **Secure Billing Information** * The Netscape Store accepts payment on credit card / check card only. * All credit card information submitted to the Netscape Store is kept secure by Netscape's Secure Socket Layer Protocol. Credit Card: MASTERCARD Card Number: 9993999394229 Expiration Date: Jan (01) 1998 Email Address: someone@someplace.com.au Verify Email: **Figure 22:** Netscape General Store's credit card payment form. Available WWW: https://transact.netscape.com/ms_dom_bin/txsvr (1998, September 18).
4	**Electronic Funds Transfer**
	This is available for customers who have Internet banking capabilities. The customer can transfer funds between accounts and pay a bill to a nominated company.
5	**Electronic Cheques**
	A customer sends an electronic cheque endorsed with a digital signature. Before

customers can use electronic checks they have to register with the online service, so the company can be sure they are credible. When a customer sends an electronic cheque and it is deposited, a transfer of funds occurs from the customer's account to the company's account.

Electronic Cash

Electronic cash acts the same way as normal cash but it is in electronic form. Electronic cash has the same cash qualities in that it can be given or traded with someone else. The four main properties of electronic cash are monetary value, exchangeability, retrievability and security. Electronic cash has monetary value where it is endorsed by cash or bank-authorised credit, meaning it can be recognised by any merchant. It also is exchangeable with an intermediary just like cash, cheque or credit. Electronic cash is retrievable and storable. It can be stored in an online bank or a personal computer. It needs to be kept secure so that people cannot steal it or counterfeit it.

Electronic cash is created by digital signatures on each note. Every electronic note has a serial number so duplication will not occur. The electronic cash is purchased from the bank and can be spent at any shop that accepts it. An example of electronic cash is St George Bank's Ecash.

Sample

The sample consisted of companies in the areas of banking, insurance and investing.

These companies were selected from the *Business Review Weekly's* Australian top

500 companies in 1998, as they usually provide leadership in the use of information

technology (Borenstein, Harrison & Peterson, 1998, p. 78-90). When a company did

not have a Web site, the next company below it on the earnings list was selected.

In locating the Web sites for the selected companies, two search engines were used,

(1) Metacrawler (www.metacrawler.com) and (2) Hotbot (www.hotbot.com).

Metacrawler was used in searching for the companies as it is comprised of seven other

popular and comprehensive search engines: Webcrawler, Yahoo, Infoseek, Alta Vista,

Excite, Thunderstone and Lycos. According to WWW.Consult (1998) these search

engines cover up to 56% of WWW users choices for searching. Therefore,

Metacrawler serves as the primary tool in searching for the targeted companies' Web

sites. Hotbot was selected to validate the results from the searches in Metacrawler as it

was considered to be an accurate and comprehensive WWW search engine for

corporate Web sites according this researcher's experience.

The data was collected and validated between August 24, 1998 and September 18,

1998 by searching both the search engines on company name. The sample Web sites

were arranged into three categories: banks & finance; insurance; and investments &

financial services. The arrangement is in line with the Australia Stock Exchange's

categorisation of listed companies. The sample consisted of twenty-six Web sites.

There are twelve banks, six insurance companies and eight finance companies. They

are listed below.

Table 2: List of Sample Web Sites

Sample Web Sites	
Banks and Finance	**Web Site Address**
Adelaide Bank	www.adelaidebank.com.au
ANZ Bank	www.anz.com.au
Bankers Trust	www.bankerstrust.com.au
Bankwest	www.bankwest.com.au
Bendigo Bank	www.benbank.com.au
Colonial Bank	www.colonial.com.au
Commonwealth Bank	www.commbank.com.au
Macquarie Bank	www.macquarie.com.au
St George Bank	www.stgeorge.com.au
Suncorp-Metway	www.suncorp-metway.com.au
Westpac Bank	www.westpac.com.au

Insurance	**Web Site Address**
AMP	www.amp.com.au
GIO Australia	www.gio.com.au
MMI	www.mmi.com.au
National Mutual	www.nm.com.au
QBE Insurance	www.qbe.com.au
SGIO	www.sgio.com.au

Investment and Financial Services	Web Site Address
Australian Foundation Investments	www.afi.com.au
Australia Wide Industries	www.ausgold.com/awi/
BT Australian Equity	www.btfunds.com.au
Djerriwarrh Investments	www.djerri.com.au
NMFM Asia Investments	www.nmfm.com.au
Permanent Trustee	www.permanent-trustee.com.au
Perpetual Trustees	www.perpetual.com.au
Quantum Resources	www.ausgold.com/qua/

Procedure

A numerical score was applied to each customer support function feature found on the Web site. The Web site score was determined by viewing the elements of each customer support function and assigning the value set out in the scoring scheme (Table 1) described in the previous section. Each score was determined by the number of elements present on the Web site. To gain a value of 5 the Web site would had to have all the elements for that category as well as the elements for the previous support functions in that category.

For example, the information function of AMP Insurance's Web site achieved a score of three. The elements of contact, company profile and products/services were present.

Table 3: Summary of Information Function.

1	Contact
2	Value 1+ Company Profile
3	Value 2+ Products and Services
4	Value 3+ Frequently Asked Questions Technical and Non-technical Documentation
5	Value 4+ Client History

If a Web site displayed some but not all of the features in a category, it was scored fully for the category (ie. when half of the features were present) It was scored at the next lowest score when fewer than half the features were present. For example, where a Web site had the elements of contact, company profile, products & services and frequently asked questions but did not have technical documentation it was given the higher score (4), as it contained more than half of the higher score's elements (Table 3).

Results

A total of 26 Web sites in the Australian banking and financial services sector were

analysed. The results are presented in a table 5, showing the customer support

functions of the Web site. In table 5 the target companies are separated by industry

type. The level of customer support for each feature was totalled to give an overall

score for each company. Table 5 provides an example by showing the companies'

scores for each of the support functions and then an overall total. The total scores for

each of the companies is provided in table 4. It also shows the ranking of the

companies from highest to lowest according to the company's customer support level

score. The percentage of customer support versus the total possible score for customer

support is also given in table 4.

Table 4: Ranking and Percentage of Target Companies Web Sites

Company	Rank	Score	Percentage
Total Possible Score		*40*	*100%*
St George	1	35	88%
ANZ	2	32	80%
Commonwealth	2	32	80%
Adelaide Bank	3	31	78%
Suncorp-Metway	4	27	68%
National (NAB)	5	26	65%
BT Australia Equity	6	23	58%
Colonial	7	22	55%
Macquarie	7	22	55%
Westpac	8	20	50%
Bankwest	9	18	45%
National Mutual	10	17	43%

Perpetual Trustees	10	17	43%
AMP	11	16	40%
GIO Australia	11	16	40%
MMI	11	16	40%
NMFM Asia Investments	12	15	38%
Bendigo Bank	12	14	35%
QBE Insurance	14	13	33%
Bankers Trust	15	12	30%
Permanent Trustee	15	12	30%
Aust. Foundation Investments	16	11	28%
Australia Wide Industries	16	11	28%
Djerriwarrh Investments	16	11	28%
Quantum Resources	16	11	28%
SGIO	16	11	28%

Table 5: Customer Support Function Scores

	The Customer Support Functions									
Company	Information	Consultation	Order-taking	Hospitality	Safekeeping	Exceptions	Billing	Payment	**Total**	**Average**
BANKS										
Adelaide Bank	4	4	3	3	5	4	4	4	31	3.88
ANZ	4	4	3	4	5	4	4	4	32	4.00
Bankers Trust	3	2	1	2	1	1	1	1	12	1.50
Bankwest	3	3	2	3	1	2	2	2	18	2.25
Bendigo Bank	3	2	2	2	1	1	1	2	14	1.75
Colonial	4	4	3	3	2	2	2	2	22	2.75
Commonwealth	4	4	3	4	5	4	4	4	32	4.00
Macquarie	3	3	2	3	4	2	2	3	22	2.75
National (NAB)	4	4	3	3	2	4	2	4	26	3.25
St George	5	4	3	4	5	4	5	5	35	4.38
Suncorp-Metway	4	4	3	4	4	4	2	2	27	3.38
Westpac	4	3	2	3	2	2	2	2	20	2.50

Company	Information	Consultation	Order-taking	Hospitality	Safekeeping	Exceptions	Billing	Payment	Total	Average
INSURANCE										
AMP	3	3	2	3	1	2	1	1	16	2.00
GIO Australia	4	3	2	2	1	2	1	1	16	2.00
MMI	3	3	1	3	3	1	1	1	16	2.00
National Mutual	3	3	2	3	1	2	2	1	17	2.13
QBE Insurance	3	2	1	2	1	1	2	1	13	1.63
SGIO	2	2	1	2	1	1	1	1	11	1.38
INVESTMENTS										
Aust. Foundation Investments	2	2	2	1	1	1	1	1	11	1.38
Australia Wide Industries	2	2	1	2	1	1	1	1	11	1.38
BT Australia Equity	4	4	3	3	3	4	1	1	23	2.88
Djerriwarrh Investments	2	2	2	1	1	1	1	1	11	1.38
NMFM Asia Investments	3	4	2	2	1	1	1	1	15	1.88
Permanent Trustee	3	2	1	2	1	1	1	1	12	1.50
Perpetual Trustees	3	3	2	2	3	2	1	1	17	2.13
Quantum Resources	2	2	1	2	1	1	1	1	11	1.38

Level of Customer Support

In determining the customer service and support levels for the analysed Web sites a total of eight customer support functions were surveyed as follows: information, consultation, order-taking, hospitality, exceptions, safekeeping, billing and payment. The Web sites included in the study all provided some level of customer support, but a majority of them did not fully exploit Web based customer support opportunities. Less than 40% of the target companies provided 50% or more of support features. Figure 23 provides a comparison between the customer support levels of each company and industry type. Web sites of banks provide higher levels of customer support compared to the other companies. In the banking industry St George (35) provides the highest level followed closely by ANZ bank (32), Commonwealth bank (32) and Adelaide Bank (31). The other banks in the study provided a range of customer support features producing a spread of scores as follows. Suncorp-Metway (27), National Bank (26), Colonial (22), Macquarie Bank (22), Westpac (20), Bankwest (18), Bendigo Bank (14) and Bankers Trust (12).

The insurance companies' Web sites in the sample do not show high levels of customer support compared to banks. The highest scoring Web site in this category is National Mutual (17) followed by AMP (16), GIO (16), MMI (16), with the remaining being QBE (13) and SGIO (11). These companies are not highly differentiated from each other in Web based customer support.

The Web sites of the investments and financial services category provided similar levels of customer support to insurance companies with the exception of BT

Australian Equity (23) who are clearly ahead of their direct competitors' Web sites.
The remaining investment Web sites scores were Perpetual Trustees (17), NMFM
Asia Investments (15), Permanent Trustee (12), AFI (11), AWI (11), Djerriwarrh (11)
and Quantum Resources (11).

Figure 23: Customer Support Level Scores by Company
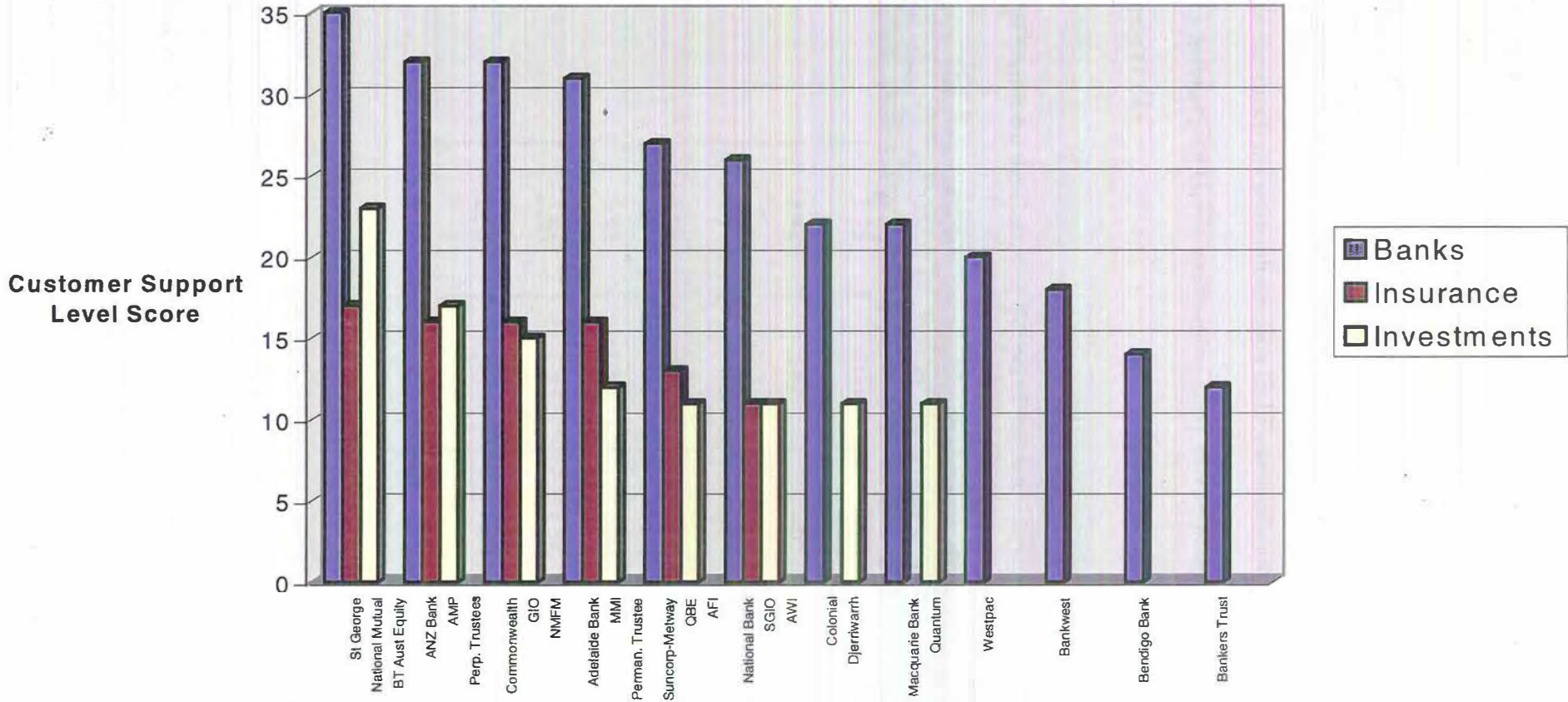
Level of Customer Support Functions

Figure 24 provides a view of the average level of each customer support function across the three industries. Banks' scores were higher in most functions. The average scores for each of the functions were information (3.13), consultation (2.90), hospitality (2.51), safekeeping (1.97), exceptions (1.94), order-taking (1.92), billing (1.64) and payment (1.64).

Table 6: Average Scores for the Customer Support Function

Customer Support Function	Banks	Insurance	Investments	Combined Average
Information	3.75	3.00	2.63	3.13
Consultation	3.42	2.67	2.63	2.90
Hospitality	3.17	2.50	1.88	2.51
Safekeeping	3.08	1.33	1.50	1.97
Exceptions	2.83	1.50	1.50	1.94
Order-taking	2.50	1.50	1.75	1.92
Billing	2.58	1.33	1.00	1.64
Payment	2.92	1.00	1.00	1.64

Information, consultation and order-taking scored similarly across the three company categories. Investment companies provided a lower level of hospitality. Safekeeping, exceptions, billing and payment show a major difference between banks and the other categories. Insurance and investment companies show a low level in each of these

functions. The banks have shown an average level of customer support throughout each of the functions.

The average percentage of the customer support functions were information (63%), consultation (58%), hospitality (50%), safekeeping (39%), exceptions (39%), order-taking (38%), billing (33%) and payment (33%). This indicates the potential for companies to increase customer support elements in order-taking, billing and payment.

Figure 24: Mean Levels of Customer Support Function Scores
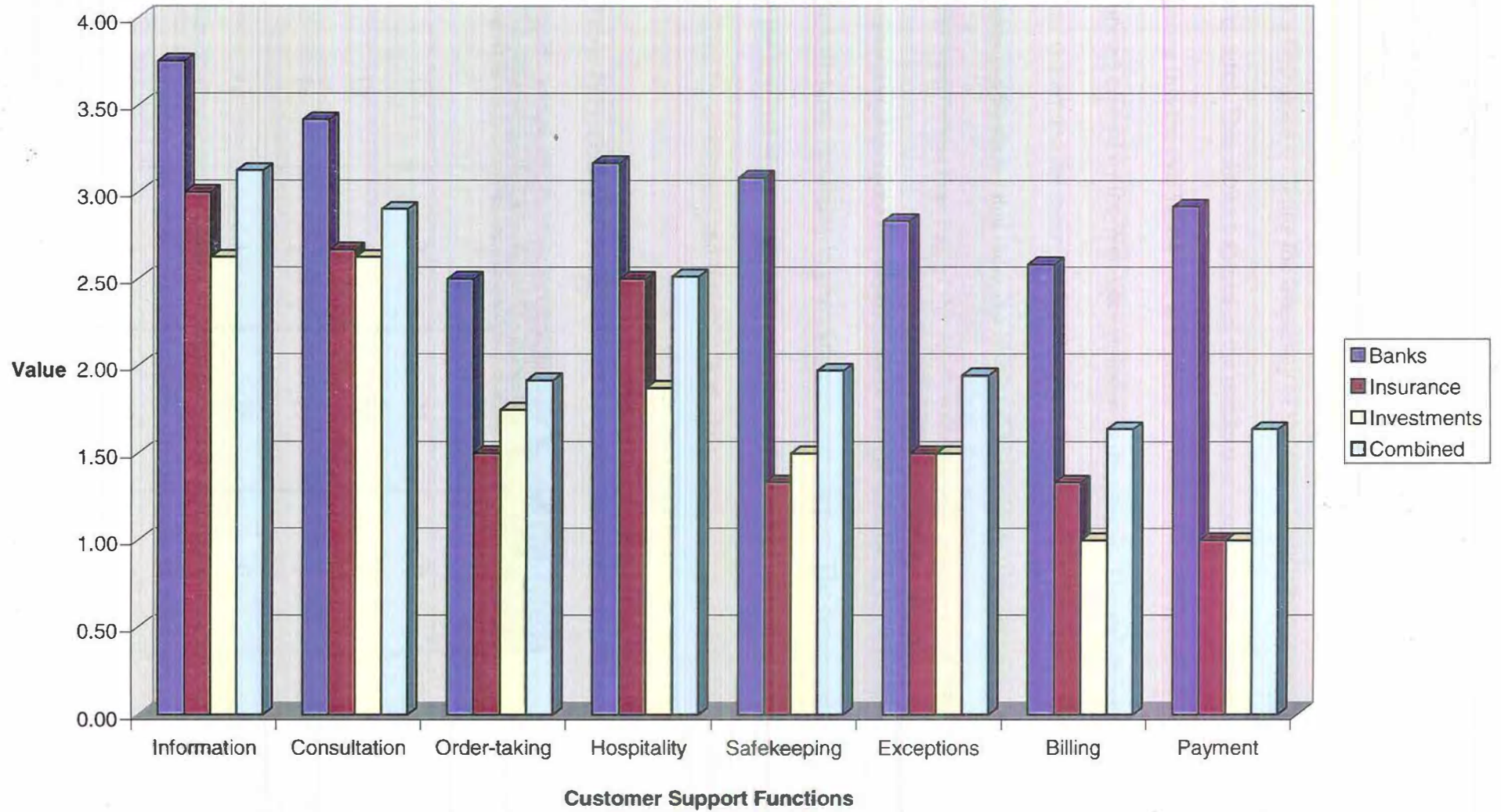
Frequency of Scores

Figure 25 is a histogram outlining the frequency of the score levels attained by the surveyed Web sites. This shows a spread of the results over the customer support levels indicating that the evaluation tool is useful in differentiating the levels of customer support offered by the Web sites included in the sample. The values are widely spread out around the mean (18.9), creating a large standard deviation (7.53). The mean level (18.9) shows that there is a low level of customer support among the sample, as the mean is less than half of the maximum customer support level. The standard deviation (7.53) shows the distribution of the values among these companies is quite wide indicating variability in providing customer support. The concentration of scores or the low end of the range reflects the generally lower levels of customer support provided by investment and financial Web sites.

Table 7: Frequency of Scores

Score	Frequency	Score	Frequency
11	5	24	0
12	2	25	0
13	1	26	1
14	1	27	1
15	1	28	0
16	3	29	0
17	2	30	0
18	1	31	1

19	0	32	2
20	1	33	0
21	0	34	0
22	2	35	1
23	1		

Std. Dev = 7.53
Mean = 18.9
N = 26

Customer Support Level Score
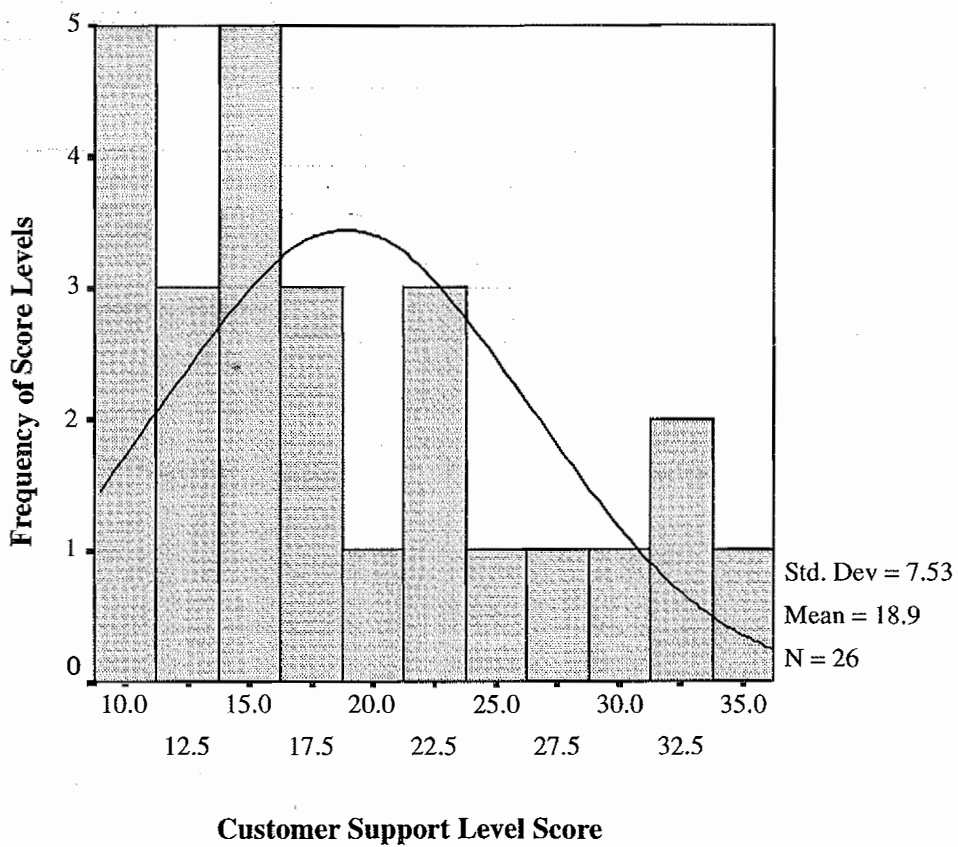
Figure 25: Histogram of the Frequency in Customer Support Scores

Discussion

It is apparent that Australian banking and financial services are using the World Wide Web for supporting customers in presale, sale and post-sale activities. As their customers are becoming more sophisticated and competition is increasing, companies need to ensure that their Web sites are effective. The Web sites of these companies are offering customer's much support through providing information on products/services, FAQs, intelligent agents, search engines, product literature, help guides, contacts, etc. Some companies also go the extra step by incorporating a human element to their Web sites by incorporating online communities, personalization and attractive user interfaces. There are a variety of methods to offer quality service to customers, but not all companies are making use of them.

The Web based customer support model when applied to Web sites of the Australian banking and financial services sector allows comparisons to be drawn between each Web site in the level of customer support provided. These levels enable companies to see their positions in providing customer support in relation to competitors. Some companies provide high levels of customer support such as St George (35), ANZ (32) and Commonwealth (32) banks. More than two-thirds of the companies surveyed provided less than half of the maximum score in providing customer support. These companies can use the Web based customer support model to identify ways in which customer support can be enhanced. The high performing companies still need to monitor their customer support levels and utilise new technologies as they are developed to continually improve customer service and support.

Limitations

The Web based customer support model presented is limited in using the same model to continually evaluate corporate Web sites over time. The customer support elements that make up the model are continually changing in this medium and a currently high scoring element could be reduced in importance over time, as new and improved customer support elements become available. This can be resolved by a periodic monitoring of the new technologies available for customer support so that the model can be updated to reflect technological change.

The model also suggests that the more customer support elements utilised in a Web site creates a higher level of customer support. In some cases, use of multiple customer support elements could reduce the level of support by distracting or confusing the user. For example a customer wants to know the interest rates for home loans, but on entry to the Web site he/she is requested to enter information for personalization purposes so the Web site is adjusted to suit him/her. After this is accomplished he/she cannot just find the interest rates but has to enter details on his/her earnings and expenses so the bank can suggest a home loan and interest rate suited for him/her. This can cause the customer to leave the Web site and enter a competitor's one. There is a need to find a balance between the range and complexity of customer support elements provided. Gathering customer feedback and monitoring the Web site's activity makes it possible to identify those customer support elements which are most heavily used.

Further Research

This study has developed a model for companies to assess the effectiveness of corporate Web sites in providing customer service and support. It was applied to companies in the banking and financial services sector. Further research is needed to verify that the Web based model is an effective tool for evaluating companies' customer service and support level in sectors outside banking and financial services. Additional research could include application of the Web based customer service and support model to:

- The same sample at a later period.

- Other banking and financial institutions' Web sites such as United States, Europe and Asia.

- Web sites of companies in other industry sectors such as retail (Amazon.Com, Travel.Com), technology (Microsoft, Cisco Systems, IBM) and government (Immigration, Social Services).

Another area which merits further study is the interrelationship of Web based customer support features and how an optimal combination of those features for any particular industry or business can be identified.

Conclusion

This study was developed to create a model for evaluating the effectiveness of customer service and support provided in corporate Web sites. Lovelock's Flower of Service Model was adapted from traditional customer service functions to Web based functions. The adapted model was applied to Web sites of the highest earning Australian banking and financial services companies. By applying the model to their corporate Web site and those of competitors, companies can establish their position relative to others in providing quality Web based customer support. Companies can also use the model to improve their customer support level by identifying gaps in the customer support features and incorporating the appropriate customer support elements in the Web site.

Quality customer service is a key factor for companies to differentiate themselves in the physical and online marketplace. By using the World Wide Web for this purpose it is possible to engage the customer with the company forming a relationship which creates customer loyalty. One customer support element that facilitates this is online communities that allow customers with similar preferences to communicate with each other over the company's product/service or related areas. Another element is online forms coupled with online payment methods that allow customers to make bookings, reservations or purchases over the Web from their home or office by paying with their credit card or electronic cash. Bringing together the many customer support elements can create a superior customer support function, so the company can redefine relationships with customers. No longer will customers just be purchasing the product

or service but be involved. The customer can try out new products through the Web and give back feedback to the company so the product can be improved or modified according to customer's satisfaction.

The Australia banking and financial services sector offers customers complex products and services which necessitates the provision of comprehensive support facilities. The incorporation of product information and applications such as intelligent agents and Web calculators will assist customer in the pretransaction phase. The provision of order-taking elements (eg, online application forms) and online billing and payment methods (eg, electronic cash) will help the customer in the transaction. Inclusion of exception elements (eg, FAQs or troubleshooting tools) can assist the customer in the posttransaction. The hospitality and safekeeping functions provide the human element by making the customer's stay at the Web site most enjoyable and comfortable. The customer support functions are interdependent with each other in providing WWW service quality, as if one function performs badly it can create a negative perception by the customer. Hence, the need for companies to evaluate the customer support function on their Web site. The Web based customer service and support model provides a tool which can be used for this purpose.

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Appendices

Appendix 1: Definition of Terms.

Appendix 2: Customer Support Elements of Selected Web Sites.

Appendix 1: Definition of Terms

This project involves communication and information technologies, so the following is a list of terms that commonly arise.

Adobe Portable Document Format (PDF):

Is an exchangeable data file format developed by Adobe Systems. The PDF file retains all of the original document layout and fonts even when displayed on a different system without the same fonts or software. For a person to read these PDF files they need to use Adobe's Acrobat Reader.

Browser:

Is an application program that allows a person to read HTML. The browser interprets the information from WWW files to place the information (text, graphics, video, animation, etc.) for the user to view. The browser provides some means of navigation around the WWW. Popular WWW browsers are Netscape Navigator and Microsoft's Internet Explorer.

Chat-room:

This is an area within the Web site that users can type in messages to each other (chat) in real time, creating an online conversation. Most chat-rooms discuss a particular topic.

Electronic mail (E-mail):

The delivery of text messages over a network from one computer to another, generally messages created by a person and intended for one or more people. Also, files can be sent or received in any format such as software, images, sound and video.

Homepage:

This is the main page of the Web site, possibly the first page the user sees when entering. The contents of the Web site are centered on this page.

Internet:

The Internet is a network of networks which interchange data using a standard communications protocol known as TCP/IP (Transmission Control Protocol/Internet Protocol). The U.S. Defence Department originally developed it, in order to continue in maintaining communications if in the event of a nuclear war. The Internet moves data from one point to another via networks until the destination is reached.

Multimedia:

Documents that combine multiple elements such as text, graphics, photographs, animation, audio and video.

Newsgroups:

These are discussion groups made up by users that contain information on various topics, from significant to minor issues.

Web Site:

Is a person's or company's own place on the World Wide Web, where it consists of an introductory page known as the homepage and has a number of pages linked to it.

Each Web site has a unique address known as a URL (Uniform Resource Locator) in a form such as http://www.cowan.edu.au (Edith Cowan University Web site).

World Wide Web:

Also, known as WWW or the Web, it is a system that enables information, including text, audio, video, animation and graphics to be accessed anywhere on the Internet using a browser program (e.g. Netscape). It makes use of HTML (Hypertext Mark-up Language) and HTTP (Hypertext Transfer Protocol) to give access to documents at many different physical locations.

Appendix 2: Customer Support Elements of Selected Web Sites

Customer Support Elements	Adelaide Bank	ANZ Bank	Bankers Trust	Bankwest	Bendigo Bank	Colonial	Commonwealth	Macquarie Bank	National Bank	St George Bank	Suncorp-Metway	Westpac Bank	AMP	GIO	MMI	National Mutual	QBE	SGIO	AFI	AWI	BT Aust. Equity	Djerriwarh	NMFM Asia	Perm. Trustee	Perp. Trustee	Quantum Res.
Information																										
Contact	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Company Profile	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Products & Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	
FAQs	✓	✓				✓	✓		✓	✓	✓	✓			✓						✓					
Documentation	✓	✓				✓	✓		✓	✓	✓	✓									✓					
Client History										✓																

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Consultation																								
None	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Email Contact	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Forms	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓		✓		✓
Intelligent Agents																						✓		
Tutoring or Training	✓	✓				✓	✓		✓	✓	✓									✓		✓		
Calculators	✓	✓				✓	✓		✓	✓	✓									✓		✓		
Real-time Advice																								

Order-taking																								
None	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Email Order	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Order Forms	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓		✓	✓	✓		✓
Telephone Number	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓							✓		✓	✓	✓		✓
Online Order	✓					✓	✓		✓	✓	✓										✓			

Forms																										
Online Reservation Form		✓						✓	✓																	
Online Booking Form	✓	✓				✓	✓				✓	✓								✓						
Ordering Guide																										
Shopping Cart																										
Personal Order																										
Hospitality																										
Unstructured	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	✓	–	–	✓	–	–	–	–		
Text-based	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	✓	–	–	✓	–	–	–	–		
Navigation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	
Rich Content	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	
Metaphoric Navigation		✓					✓		✓	✓	✓	✓				✓										
Structured	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓					

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26
Content																										
Help Guides						✓			✓																	
Search Engines	✓	✓		✓		✓	✓		✓	✓	✓	✓	✓			✓	✓				✓					
Glossary		✓		✓			✓	✓	✓	✓	✓	✓				✓										
Sitemap	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓				✓	✓				✓					
Links	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓			✓	✓				✓					
Connection Speed	✓																									
What's New	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓					
Online Community																										
Newsletters/ Magazines		✓		✓			✓	✓		✓	✓					✓										
Members' Area							✓		✓	✓	✓					✓					✓					
Languages		✓																								
Personalised User Interface																										

Safekeeping																										
No Security	-	-	✓	✓	✓	-	-	-	-	-	-	-	✓	✓	-	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓
Information on Security	✓	✓				✓	✓	✓	✓	✓	✓	✓			✓						✓					✓
User Authorisation	✓	✓				✓	✓		✓	✓					✓						✓					✓
Firewalls	✓	✓				✓	✓		✓	✓																
Data Encryption	✓	✓				✓	✓		✓	✓																
SSL	✓	✓				✓	✓		✓	✓																
Digital Signatures									✓																	
SET	✓	✓				✓			✓																	

Exceptions																										
Email Contact	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Guestbook				✓		✓			✓																	
Feedback Forms	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓						✓				✓	

Special Requests	✓	✓				✓		✓	✓	✓										✓									
Complaint/ Suggestion Forms	✓	✓				✓		✓	✓	✓										✓									
Troubleshooting Tools	✓	✓				✓		✓	✓	✓										✓									
Trouble-Tickets																													
Billing																													
None	–	–	✓	–	✓	–	–	–	–	–	–	✓	✓	✓	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Self-Billing	✓	✓		✓		✓	✓	✓	✓	✓	✓				✓	✓													
Invoice	✓	✓				✓			✓																				
Periodic Statements	✓	✓				✓			✓																				
On-Screen Display	✓	✓				✓			✓																				
Online Personal Account									✓																				

Payment																										
None	–	–	✓	–	–	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cash/Cheque	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓														
Credit Card	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓														
Credit Card (online)	✓	✓					✓	✓	✓	✓																
EFT	✓	✓					✓		✓	✓																
Electronic Cheques	✓	✓					✓			✓																
Electronic Cash										✓																

✓ = The Corporate Web Site has the customer support element. — = The customer support element does not apply.