EMPIRICAL TESTING OF A CUSTOMER RELATIONSHIP MANAGEMENT MODEL IN CONSUMER INTERNET SERVICES

by

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Synopsis

An extensive literature study, as well as quantitative and qualitative research was performed, in order to gain insights into relationship management within consumer Internet service provision. Consumer Internet service is similar to banking, pay television and a cellular service in that it constitutes continuous service delivery. The investigation was based on a model founded in services and relationship marketing literature. The basic premise of the model is that service quality leads to customer satisfaction, which in turn leads to relationship quality. Structural equation modelling was used and the relationships empirically confirmed.

The literature component of the study starts with a review of the Internet, the Internet in South Africa and Internet Services in general. Emphasis then moves to the defining of a core service component for Internet service delivery as well as value-added services as a means to escalate Internet service beyond a commodity. From this premise, the relationships between value-added services and service quality, and customer satisfaction and relationship quality, are investigated. It is then confirmed that a significant relationship exists between value-added services and service quality.

The marketing of services and service quality are reviewed in order to create context for the GAPS model and the SERVQUAL instrument. The SERVQUAL instrument has been proven to be both a reliable and valid instrument for the measuring of service quality within the Internet Industry. Service blueprinting was done in order to represent the Internet service delivery process visually. Fail-points in delivery were identified and prioritised from the point of view of the subscriber.

Customer satisfaction theory is reviewed and the flow construct as means of behavioural profiling is investigated. Satisfaction derived from using the Internet is tested in relation to service quality, customer satisfaction and relationship quality. It is interesting to note that the most significant relationship exists between Internet satisfaction and relationship quality.

The evolution of relationship marketing and relationship management is investigated and an overview given of relationship strategy. Relationship quality as a dynamic concept is then investigated. The relationship between relationship quality and customer retention has been found to be weak, but still significant.

An Internet based research design was used for collection and the instrument used was an Internet based questionnaire. The sample size was 10 000 Internet subscribers and 1372 usable responses were obtained.

Voorwoord

'n Indiepte ondersoek bestaande uit 'n literatuurstudie asook kwalitatiewe en kwantitatiewe navorsing is geloods om dieper insig te verkry oor verbruikers-Internet diensverskaffing. Verbruikers-Internet is soortgelyk in bankdienste, betaal televisie en sellulêre dienste in die opsig dat dienverskaffing deurlopend plaasvind. Die ondersoek is gebaseer op 'n model wat gevind is binne die konteks van die bemarking van dienste en verhoudingsbemarking. Die basis van die model is dat dienskwaliteit lei to verbruikers satisfaksie, wat op sy beurt weer lei tot verhoudings kwaliteit. Gestruktureerde vergelyking modellering is gebruik en die voorgestelde model is bevestig as geldig.

Die literatuur afdeling van die studie begin met 'n oorsig van die Internet, die Internet in Suid-Afrika en Internet dienste in die algemeen. Klem verskuif dan na die definëring van die kern diens-element van Internet diensverskaffing asook die waarde-toevoegende-dienste wat ingespan word om Internet dienste te weerhou daarvan om kommoditeit status te verkry. Hieruit voortvloeiend word ondersoek ingestel na die verband tussen waarde-toevoegende-dienste en onderskeidelik dienskwaliteit, verbruikers satisfaksie en verhoudings kwaliteit. Dit word bevind dat 'n sterk verwantskap bestaan tussen waarde-toevoegende-dienste en dienskwaliteit.

Die bemarking van dienste en dienskwaliteit word ondersoek ten einde konteks te verskaf vir die gapings model van dienskwaliteit en die SERVQUAL instrument vir dienskwaliteit meting. Bevindinge staaf dat die SERVQUAL instrument 'n betroubare en geldige meetinstrument is vir die meting van dienskwaliteit binne die Internet industrie. 'n Dienslewerings-bloudruk is opgestel ten einde die diensleweringsproses visueel voor te stel. Faal-punte in dienslewering is identifiseer en prioritiseer vanaf die verbruiker se oogpunt.

Verbruiker satisfaksie teorie is bestudeer en die "Flow" konstruk ondersoek as moontlike gedragsprofiel segmenteerder. Verbruikers satisfaksie verkry deur die gebruik van die Internet is getoets in verhouding tot dienskwaliteit, verbuikers satisfaksie en verhoudings kwaliteit. Die interessante bevinding wat gemaak is, is dat die sterkste verhouding bestaan tussen Internet gebruik satisfaksie en verhoudings kwaliteit.

Die evolusie van verhoudings bemarking en verhoudings bestuur is ondersoek en 'n oorsig is gegee van verhoudingsbou strategie. Verhoudings kwaliteit as 'n dinamiese konsep is bestudeer. Dit is bevind dat die verhouding tussen verhoudings kwaliteit en verbruikers se voordurende diensgebruik swak maar wel statisties noemenswaardig is.

'n Internet gebaseerde navorsings ontwerp is gebruik vir vraelys en insamelings doeleindes. Die steekproefgrootte was 10 000 Internet verbruikers en 1 372 bruikbare response is verkry.

Hierdie verhandeling word opgedra aan my ouers; en hulle ouers ☺

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"Doen slegs U wil Heer, U wil met my,
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Chapter 1
Context and Background

1.1. Introduction

Numerous academic writers debate the validity of the commonly accepted relationship between service quality, customer satisfaction and relationship quality. The following research model have been defined in order to investigate these constructs and their relationships in more detail:

Literature Study	**Internet Services** The Marketing of Services Relationship Marketing Interrelationships between constructs
Methodology	Survey and Analysis
Qualitative Findings	Visualisation of Internet Service provision Service breakpoints (Fail Points)
Quantitative Findings	SERVQUAL Interrelationships between constructs
Recommendations	Defining a portfolio of projects
	Academic recommendations

This chapter will cover the following topics in order to enlighten the concept of Internet services and the challenges for the Internet service provider:

(1) The Internet–history of the Internet internationally.
(2) The Internet in South Africa – origins and growth of the Internet industry in South Africa, Internet churn, and consumer Internet services.
(3) Classification of consumer Internet services as a continuous service.

Attention will then turn to a discussion around the scope of the study:

(1) The problem of customer retention, value added services as well as service quality improvements as proposed initiatives.
(2) The flow construct as a potential customer satisfaction profiling construct within the Internet industry.
(3) Operational definitions of the constructs within the study.
(4) And an overview of the chapters to follow.

Why a relationship marketing perspective?

Both manufacturing and service firms are finding it harder to establish sustainable technology-based advantages. To avoid commodity status, they must focus on strengthening the value-added features of their products and services. In the long run, competitors may copy tangible augmented product

features. Relationship marketing can provide a more intangible, but stronger, long-term customer benefit that may be difficult to match (Evans and Laskin, 1994:439-452).

As markets mature, customer retention becomes increasingly important, taking priority over strategies to increase market share. Relationship marketing provides a framework for achieving the essential co-ordination between marketing, customer service, and quality programs. Moving customers up the loyalty ladder is not simple. Organisations need in-depth knowledge of what each individual customer wants and how value can continuously be added to the customer offering (Payne, 1995:29-31). A further advantage of Relationship Marketing is that it can assist a firm to escape commodity-like status (Evans and Laskin, 1994:439-452).

1.2. The Internet

The best way to understand the Internet is to understand its origins. In 1969, the United States Department of Defence decided to create a computer network that would be independent of normal communications systems, as well as of its individual components. Each component would be connected to every other component through numerous alternative routes, so that communications in the system would not depend on any one connection being up and running.
An example of the usefulness of this network would be that in the event of a nuclear war any part of the network could be taken out and the rest of the system would keep on functioning. The prototype network was called ARPANET (Advanced Research Project Agency Network) and consisted of only four computers, situated at four American educational and research institutions (University of Utah, University of California at Santa Barbara, University of California at Los Angeles and Stanford Research Institute).

By 1972, the number had risen to 50 computers that were connected in what had become a broader experiment, both to show how networks could function over a wide area, as well as to provide a bomb-proof communications system between research facilities involved in military projects.

The most spectacular success of this principle was revealed in rather unfortunate circumstances 20 years later, during the Gulf War. The Americans found it impossible to destroy Iraq's command network because it operated on the same principle as the original ARPANET and ran on commercially available network software.

From the end of the 1970's, numerous networks based on similar principles began emerging still connecting mainly educational and research institutions. One of these was called USENET (User's Network), created in 1980 by Tom Truscott and Jim Ellis, two students at Duke University, North Carolina.

Their idea was to create an electronic Bulletin Board System (BBS) in which users could 'post' letters, comments or articles that could be read by anyone else on the system, and that would encourage ongoing discussion. The first version connected just two computers. By 1983, 500 USENET sites were in existence on a network owned by no single person or body.

In 1995 USENET consisted of more than 8 000 separate newsgroups or discussion forums on any topic for which there appeared to be a need for discussion. Users still posted messages into these newsgroups and all messages were 'open' for all users of a group to read.

Before the explosion of the World Wide Web, USENET was the most widely used part of the Internet and a popular newsgroup, like the humour forum, could find itself being accessed regularly by half a million users.
Meanwhile, ARPANET was given a sidekick, the US Department of Defence's MILNET, which could be accessed through ARPANET. MILNET became the network for military sites and ARPANET for non-military sites. In effect, the first nation-wide network of networks. This combination was initially called DARPANET. Due to a communication software system called the Internet Protocol, which enabled the two inter-networks to understand each other's language, it finally came to be known as the Internet–but not the Internet that we are familiar with today.

Then there was the government-funded National Science Foundation, which was in charge of five hugely expensive supercomputer centres. Because of the cost, all borne by the taxpayer, the National Science Foundation wanted to make its system available to the entire research community. To do that, they needed to put the computers on a network and so NSFNET was born.

This was the key breakthrough.

It was faster than the previous networks were and it was connected to regional networks set up by the National Science Foundation to link users locally across as much of the United States as possible. If a university agreed to make the service available to all its students, the National Science Foundation agreed to fund its connection. So, following the guiding principle of the original ARPANET, a student at a computer linked to any sub-network could make a connection with any other computer in the inter-network. Due to its greater efficiency, more and more sites moved off the ARPANET and on to the NSFNET.

In 1990 ARPANET closed down, its functions were taken over by NSFNET and almost every publicly and privately funded network in the United states joined the regional networks of the NSFNET. The network of networks became formally known as the Internet, with the NSFNET at its core.

Until 1995, the National Science Foundation remained a crucial element in the Internet. When the explosion of world-wide connections and on-line services began making it less relevant, the National Science Foundation went back to basics. It is now focussing on a new high-speed network for its supercomputers.

On the Internet, the initiative has been taken by Sprint, the world's largest network, which is developing a global communications backbone. The National Science Foundation's Backbone, once the single most substantial element of the Internet, is now one of many in the United States.

The National Science Foundation's policies have been enormously influential. Its *Acceptable Use Policy* states that "NSFNET Backbone services are provided to support open research and education in and among US research and instructional institutions, plus research arms of for-profit firms when engaged in open scholarly communication and research".

The National Science Foundation's is quite happy for networks connected to the Backbone to formulate their own rules. In 1991 it allowed commercial service providers to link up for the first time, through the regional networks rather than directly to the Backbone, so that the *Acceptable Use Policy* was not violated (Goldstuck, 1995).

1.3. The Internet in South Africa

South Africa has been connected to the Internet since April 1989, when a research network called Uninet-ZA was set up by the Council for Scientific and Industrial Research (CSIR) to link all universities and educational and research institutions in the country. Administered by the Foundation for Research and Development (FRD), it has its own backbone, which connects regional 'hubs' at the CSIR, the University of the Witwatersrand, the University of Cape Town, Rhodes University and the University of Natal in Durban, via high speed circuits. As with the American model, other universities and educational institutions are connected to the backbone via sub-networks. In 1995, about 50 institutions across southern Africa were connected to this network.

South Africans are described as the most active academic network users in Africa, and it should be no surprise that efforts were quickly made to link Uninet-ZA to the Internet, mainly through the efforts of researchers at Rhodes University in Grahamstown, the first South African onramp to the information highway.

Initially, Uninet-ZA was connected to the Internet through a satellite link-up, but on February 18, 1994, Uninet gained its own fibre-optic cable that connected Rhodes University to the ICMnet-Atlantic Sprint network in Washington DC. The CSIR Commercial Internet Services division also has a

direct link to the NSFNET Backbone via a Telkom leased-line on the SAT-2 cable (Goldstuck, 1995).

For the first few years, the Internet in South Africa was an open secret shared by students and lecturers. For ordinary folk, it simply did not exist. The Dial-up Electronic Bulletin Board Systems (BBS) run by hobbyists had allowed users to send and receive e-mail through international, privately operated BBS networks. The most extensive of these networks, FidoNet, is a world-wide network that links up BBS networks run by hobbyists, many of them offering free access to any member of the public who wants to dial in. Universities in Malawi, Mauritius and Zambia, which cannot justify the cost of an Internet connection, are also linked to FidoNet.

A South African equivalent of USENET, called RSANet, provided dozens of newsgroups aimed at technical, recreational (such as humour, lonely hearts and marathon running) and political discussion.

But Internet services themselves were restricted. Up to July 1993, when BBS networks were given access to USENET. Then the floodgates opened and the media began paying attention. A little more than two years later it was nearly impossible to mention computers without talking about the Internet (Goldstuck, 1995).

1.4. The Internet Industry in South Africa

The Internet in South Africa can be said to have come of age on the second of May, 1995, when the annual Computer Faire opened at Nasrec outside Johannesburg. On show were at least a dozen Internet service providers, three specialist Internet software distributors and hundreds of Internet manuals and software packages on sale by book and software vendors.

The first commercial link to the Internet was provided by a co-operative outfit called The Internetworking Company of Southern Africa (Ticsa), which set up a Cape Town hub connected by an undersea cable to Alternet, an American network with its hub in Falls Church, Virginia. The amount of companies providing Internet services has grown rapidly (Figure1.1).

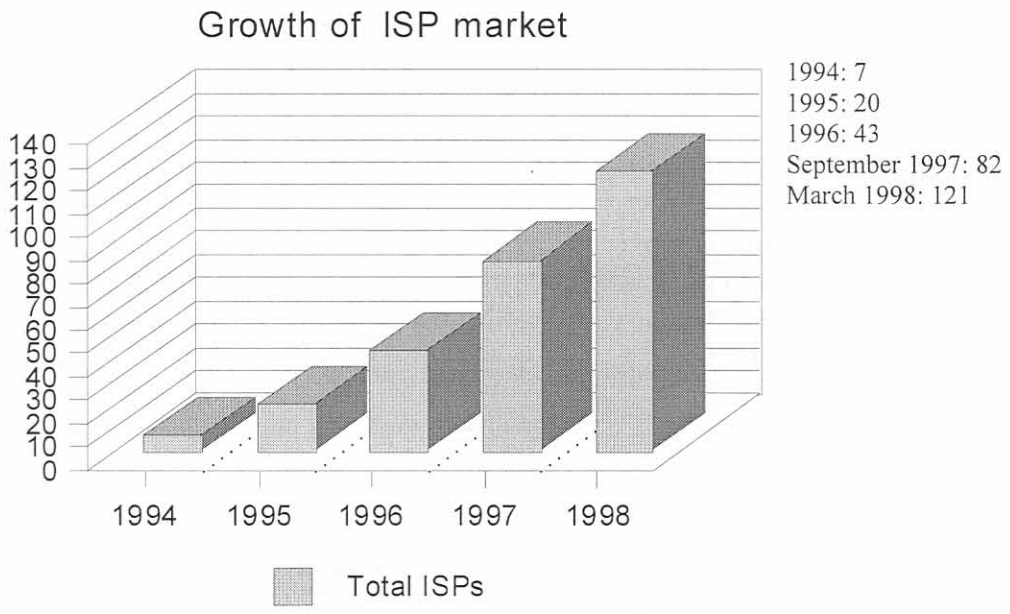
Ticsa's goal was to extend Internet services to commercial organisations and other non-academic bodies, as well as to neighbouring countries, operating with a voluntary, not-for-profit philosophy.

On 1 November 1993, Ticsa gave four commercial companies live access to the Internet, with another six following a week later. Ticsa and Uninet had entirely independent connections so that, ironically, any communications between a Ticsa site and a Uninet site had to cross the Atlantic via one cable, traverse a few networks and then come back via satellite (Goldstuck, 1995).

The steady and powerful growth that had been assumed for the industry from 1994 to 1997 continued undiminished into 1998. The approximate number of service providers starting up in each year since 1994 are based both on launch dates provided by Internet Service Providers and archival material maintained by the Media Africa researchers since 1994 (Figure 1.1). (Media Africa Research Report. 1998. South African Internet Industry)

The size of the industry at the end of each successive year, as measured by the number of 'semi-virtual' Internet Service Providers (those using both their own Points of Presence and SAIX dial-in nodes) and 'virtual' Internet Service Providers (those using only SAIX dial-in nodes).

Figure 1.1. Growth of the ISP market in South Africa.

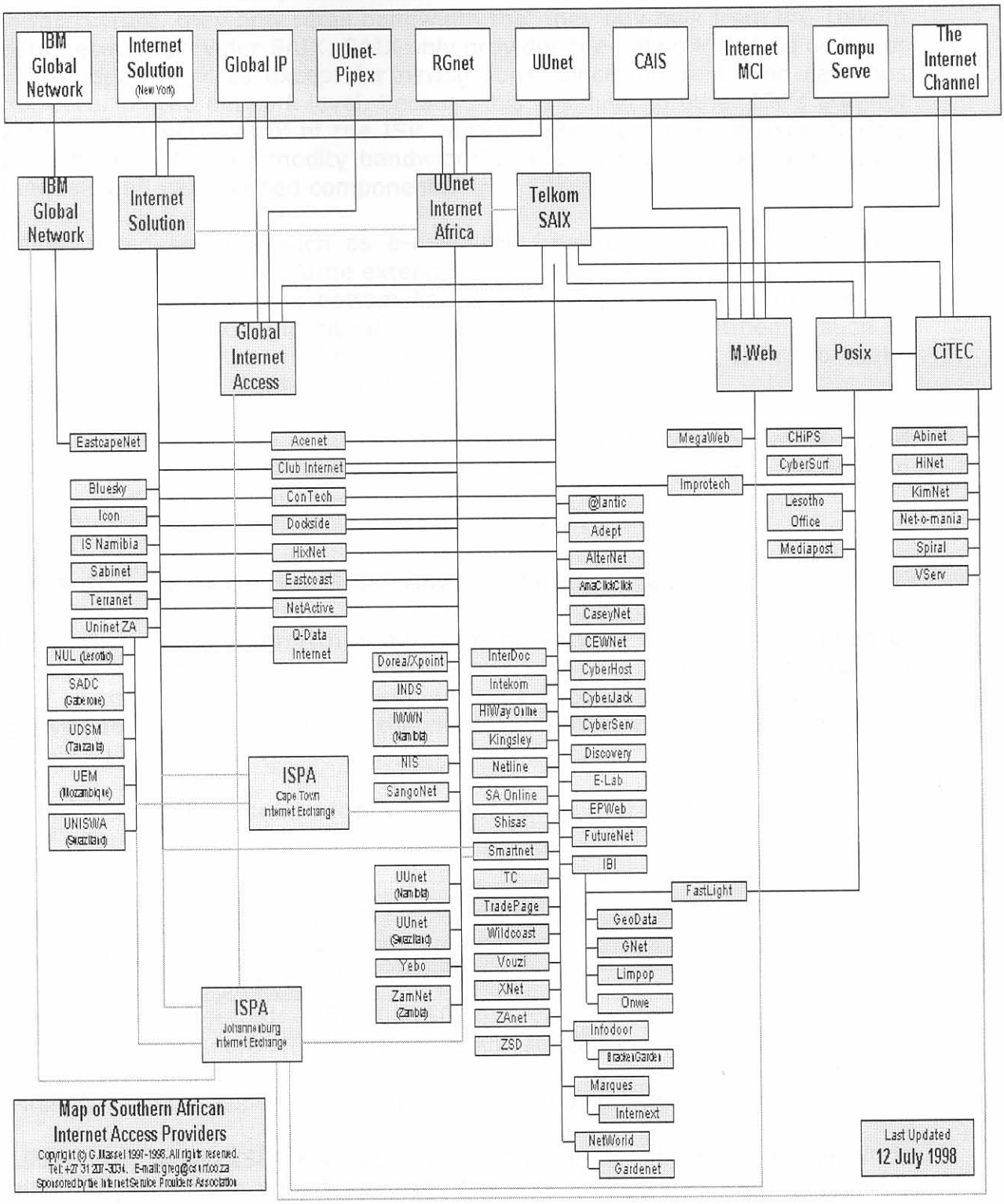


(Media Africa Research Report, 1998. South African Internet Industry.)

Because most users are dialling up Internet providers in their local areas, the telephone costs are restricted to the normal local call charges for the time they are on-line. The service provider usually has a permanent link to the Internet through high-speed cables, so someone dialling up a computer in Boulder, Colorado through their Internet provider in Bloemfontein, will still pay the cost of a local call only.

That is the bottom line to the immense potential of the Internet and why most of the hype surrounding it is hype, not due to exaggeration of the possibilities, but because it generates so much noise among true believers (Goldstuck, 1995).

Figure 1.2. The South African Internet Service Providers Map.



Explanation of virtual ISP's:
Intekom is a virtual ISP, which mean that they do not own their own network infrastructure, they only retail bandwidth that they buy bulk from the Telkom data network provider SAIX. SAIX only provides the network and no billing or value added services except for newsgroups. Since differentiation can thus not occur on the network level, because this is similar to other ISP's and not within the direct control of the ISP, virtual ISP's must rely on user friendly packaging of the 'commodity bandwidth' in the form of call centre support, manuals and value added components.

Value added services such as e-mail, toll free support and user friendly starter packs define to a large extend the space where ISP's compete for new and existing clients. The bottom line is acquiring as many subscribers as possible, in order to gain critical mass on infrastructure investments, such as call centres, and then holding on to these subscribers in order to make subscription based profits in the future.

From here the interest is in measuring the contribution of the value-added services provided on service quality, customer satisfaction and relationship quality as defined in the objectives of the study.

1.4.1. Growth of Dial-up Subscribers in South Africa

Internet subscription growth is often compared with the growth/adoption of radio, television and other technologies or channels. The researcher's view on this is that it additionally needs to be compared to telecommunication growth/adoption figures due to the close connection with network technology (Table1.1).

Table 1.1. Dial-up subscribers and percentage growth year on year.

1994:	5 300
1995:	33 600 (534%)
1996:	79 700 (137%)
Sep. 1997:	154 276 (93%)
Mar. 1998:	238 964 (55%)
Dec. 1998 -	Projected: 366 000 (110%)

(Media Africa Research Report, 1998. South African Internet Industry.)

While the figures appear very dramatic, they should be put in context:

1994—Only seven ISPs were actively selling dial-up subscriptions, very little marketing had been undertaken, and the public and media were still largely ignorant of the Internet.

1995—The number of ISPs more than doubled, and media attention increased dramatically during the year. By September of that year, Internet-

related stories continually made for the key technology coverage in all mainstream publications.

1996—Professionally packaged starter kits made their first appearance from a number of ISPs, and the number of ISPs again more than doubled. The Internet continued to dominate media coverage of technology. A large number of 'mega-ISPs' began to appear, with heavy capital investment flowing in from the traditional corporate market. Telkom entered the market with beta testing of its SAIX network, further raising awareness of the Internet and issues surrounding it. For the first time the Internet was regarded as an essential service by its users. The Internet Service Providers' Association was formed.

1997—Corporate investment in ISPs continued at a rapid pace, and intensive marketing drives were launched to capture 'mind share'. The launch of SAIX's service to 'virtual ISPs', enabling the creation of both niche services and larger ISPs without the need for investment in the level of infrastructure maintained by existing large ISPs, made a significant impact on the dial-up market.

1998—The period from September, 1997 to March, 1998, was characterised by huge growth from two ISPs, namely M-Web and GIA, largely as a result of M-Web's aggressive TV marketing campaign, which introduced the Internet to a large new audience. At the same time, UIA and Icon achieved significant growth as a result of their marketing responses to the M-Web campaign. While the major consequence of this ISP war was the brand leadership achieved by M-Web, it was the key factor in the sustained growth of the industry as a whole. (Media Africa Research Report, 1998. South African Internet Industry.)

1.4.2. Internet Churn

As service providers eye the cost of bringing new customers on board, they're beginning to take an even closer look at those who decided to end their subscription.

As a result, established ISP's are beginning to learn what publishers have known for a long time–it is cheaper to keep an existing customer than it is to find a new one.

"As the saturation of the Internet grows, customers aren't going to be as readily available in the future as they are today. We have to be in that mindset." These are the words of Greg Falconer, manager of subscriber retention for GTE Internet Solutions.

The main reason users are taking their browsers elsewhere is because they're getting what they perceive to be substandard service. Some customers are simply leapfrogging from provider to provider, one 30-day trail

at a time. But constant busy signals and disconnects are not the only reasons for churn. "For whatever reason, some customers are just going away altogether. Some are finding the Internet is not for them and they tune out completely. Others get enough access at work that they decide a home account isn't needed." This is according to Mark Snowden, analysts for consumer technology research group Inteco, of Redmond, Washington. In a recent study, Inteco reported churn rates ranging from one percent per month to more than four percent per month for some providers. On the low end, which translates to an acceptable 12 percent annual rate, climbing to a dizziness-inducing 48 percent annualised churn rate.

Concerned by such numbers, many providers are exploring new ways to keep their current share of the market. Erol's Internet Inc. in Springfield, VA., has set up a combination of technological support and customer service personnel as a last line of defence to save those who wish to cancel (Hulme, 1997).

These alarming churn forecasts, as well as the high cost associated with client acquisition drives the investigation of relationship quality as discussed in this study.

1.5. Consumer Internet Services

In order to understand the scope of consumer Internet services it is important to outline certain service components. Dial-up connectivity is the core of consumer Internet services with various applications of bandwidth 'packaged' in by the service provider in order to sell an Internet experience.

1.5.1. Dial-up IP connectivity (PPP)

By installing the appropriate software, subscribers can connect to an ISP using a TCP/IP based (Transmission Control Protocol/Internet Protocol – the original ARPANET communications protocol) connection like SLIP (Serial Line Internet Protocol) and PPP (Point to Point Protocol). These connections enable the subscriber's computer to speak in the TCP/IP language of the Internet. That means subscribers can forget about commands and use the point-and-click interface in Windows and Mac programs, streamline the downloading of files and get access to the World Wide Web (Goldstuck, 1995).

1.5.2. POPMail (e-mail)

Once the subscriber has a dial-up IP connection, they can have the service provider's system store their e-mail until the next time a connection is made. POPMail goes hand in hand with World Wide Web access, but additional software is needed (Goldstuck, 1995). An example of software that can be used for e-mail is Microsoft Outlook Express.

1.5.3. Browsing the Web (Surfing)

It is no longer possible to talk about the Internet without mentioning the World Wide Web.

The World Wide Web was developed at the European Centre for Nuclear Research (CERN) in Geneva as a result of scientists needing to communicate more efficiently with researchers throughout the world. The first proposal for a new system was put out in March, 1989 and the first Web prototype was unveiled in November, 1990. It went more or less public in 1993, when the first Windows-based Web browser, NCSA Mosaic, was released to the world at no charge.

The first public access to the Web in South Africa was made available in June, 1994 and the first reasonably fast software program for accessing the Web, Netscape Navigator, was made available on the Internet at no cost in November, 1994. That was the beginning of the end of the Internet as a specialist pursuit in South Africa.

The World Wide Web is the Internet in camouflage, disguised as a user-friendly information service that is as easy as reading a book. That would be true, if books had no starting points, no endings and no complete index.

If subscribers want to search for files or software on the Internet, they need to have live access. To use the Web a program called a Web browser is needed.

There are two styles of Web browser. The first version is text only. The most common is called Lynx, build on top of the UNIX operating system. It is a powerful but complex and inordinately difficult program. Lynx hides UNIX away and appears to be a user-friendly interface. It enables you to call up text pages from any computer linked to the Web and to make connections with related pages or files through hypertext links. These take the form of highlighted words or phrases on which the subscriber place the cursor, press Enter, and find themselves connected to another computer, site, page or file.

The problem with the Lynx approach is that subscribers can get no further than text. Graphics are beyond the reach of these browsers, unless the files are downloaded on to a disk without knowing what the content is. The second version is a Web browser such as Microsoft Internet Explorer that supports multimedia applications or a Windows-style browser (Goldstuck, 1995).

1.5.4. Internet transacting (e-commerce)

Consumers can do various types of transactions by utilising the Internet. Examples of these transactions range from buying a book at

http://www.amazon.com, to doing home banking at http://www.standard.co.za.

Commercial Internet transacting functionality ranges from:

(1) Placing an order button on a web page that sends an order request through to a vendor via e-mail, fax or other communication channels.
(2) Renting a commerce enabled web page within a 'retail-mall' hosted at an Internet service provider. Services provided usually include marketing the mall on Internet search engines and in other media. Some ISP's will also do credit card transaction processing at a fee.
(3) Hosting a web-server on the vendor's premise with transaction and stock level functionalities.

1.6. Continuous service delivery

The nature of consumer Internet services is a 'membership'/subscription relationship similar to insurance, banking services and pay television (Table1.2).

Table 1.2. Type of relationship between the service organisation and its customers.

Nature of Service Delivery	Membership Relationship	No Formal Relationship
Continuous Delivery of Service	Insurance Cable TV subscriptions College enrolment Banking Automobile Association **Internet connectivity**	Radio station Police protection Lighthouse Public highway
Discrete Transactions	Long-distance calls from subscriber phone Theatre series subscription Travel on commuter ticket Repair under warranty	Car rental Mail Service Toll Highway Pay phone Movie theatre Public transportation Restaurant

(Lovelock, 1991:28.)

This relationship lends itself to high levels of segmentation feasibility and a single periodic charge, monthly or yearly covers the subscription charges. This model is simple, but can be unfair to people with lower usage patterns. Membership relationships usually result in customer loyalty to a particular service supplier.

The supply of Internet connectivity is similar to the supply of telecommunications, utilities and a financial services, that is continuous subscription based and focuses on maximising the customer lifetime value.

In these industries, lifetime revenues from an individual customer firstly depend on the duration of the provider-customer relationship and secondly, on the average monetary amount of the customer's purchases of services across billing cycles, which reflect both price structure and usage characteristics.

The duration of the provider and customer relationship is postulated to depend on the customer's subjective expected value of the relationship, which he/she updates according to an anchoring and adjustment process. It is hypothesised that cumulative satisfaction serves as an anchor that is updated with new information obtained during service experiences.

1.7. Problem Statement

Internet Service Providers spend a substantial amount of money every year on service improvements and value-added services in order to increase service quality, customer satisfaction and relationship quality ultimately seeking customer retention. It has not yet been investigated what the relationship between these constructs is in the Internet industry. Validation of these relationships is thus the core management requirement.

Storbacka *et al.* (1994) argues that there are a number of assumptions made in the service quality literature about how quality leads to profitability. These should be verified in empirical research. The premise of this study is investigating the empirical validity of the proposed conceptual model within the Internet industry. The flow construct as behavioural construct will additionally be investigated in order to test the feasibility of behavioural profiling in the Internet industry.

Literature Objectives:

(1) Investigating the construct service quality and customer satisfaction as described in service marketing literature. Service quality and customer satisfaction is reviewed in order to establish an understanding of the measurement and management of service delivery.

(2) Investigating relationship strategy and management as described in relationship marketing literature. An overview of key strategic and operational issues of relationship management is given to introduce the concept of proactive customer retention or defensive marketing.

(3) Investigating relationship quality/relationship strength as described in relationship marketing literature. The commitment of a customer (intention) and customer loyalty (behavioural) is an important component of the model. The best scenario for a service provider is when a client is both committed and loyal to the provider.

(4) Investigating the relationship between service quality, customer satisfaction and relationship quality as described in the literature. An overview is given of the different relationships covered in the proposed model.

Qualitative objectives:

(1) To develop a visual representation of an Internet service providers service design by utilising service blueprinting. Visualisation of service design is important in order to gain an objective understanding of the service delivery process. A picture is worth a thousand words.
(2) To determine the fail-points in service delivery from the subscribers point of view. Looking from the subscriber's point of view insures that the experience of the subscriber receives paramount attention.
(3) To prioritise fail-points to be addressed within the ISP. Because resources are scarce it is important to prioritise the areas that should receive attention in service delivery improvement initiatives.

Empirical Objectives:

(1) Testing the reliability and validity of the SERVQUAL instrument for the measurement of service quality in the Internet industry. The SERVQUAL instrument is tested to see if it should be used in future tracking studies and primary research within the Internet industry.
(2) Empirically confirming interrelationships between service quality, customer satisfaction and relationship quality. Understanding if service quality improvements really lead to customer satisfaction within the Internet industry. Thereafter establishing if these satisfied customers do in fact relate to stronger relationships. Stronger relationships are proven to lead to financially positive outcomes based on relationship marketing literature.
(3) Testing hypothesis around different flow clusters with respect to customer satisfaction. If the different flow clusters does differentiate among different clusters of customer satisfaction, a concise flow questionnaire can be used to profile these clusters and different 'Internet Literacy' packages can be created in order to assure that as many as possible subscribers are moved to a satisfaction related cluster.
(4) Testing hypothesis around a proposed association between value added services and respectively service quality, customer satisfaction and relationship quality. If it is proven that strong associations exists between value added services (which costs money to the service provider to deliver) and these constructs a business case can easily be prepared to substantiate the existence of these services.
(5) Testing hypothesis around a proposed association between Internet satisfaction and respectively service quality, customer satisfaction and relationship quality. Because the Internet service provider does not have direct control over the Internet satisfaction of the subscriber it is important to assess which construct can be strongly affected by Internet satisfaction and dissatisfaction. An understanding of this

would enable the service provider to make informed decisions around counter measures and service recoveries.

(6) Testing the relationship between relationship quality and customer retention. This objective translates to the business justification of relationship quality building initiatives.

Overview of methodology:

(1) Primary research was conducted through an Internet based questionnaire. A questionnaire was hosted on an Internet page and invites e-mailed to the sample.

(2) Service blueprinting was done to determine fail-points in service delivery. A visual representation of Internet service delivery assisted in the understanding of service delivery.

The resulting data was analysed with the appropriate multivariate techniques:

(1) Reliability/Item analysis was used to determine the reliability of the SERVQUAL scale for usage in the Internet industry.

(2) Confirmatory factor analysis was used to test the validity of the SERVQUAL scale for service quality measurement within the Internet industry.

(3) Confirmatory factor analysis was used to determine the importance of the different SERVQUAL dimensions towards the overall service quality construct.

(4) Structural equation modelling was used to confirm the causal relationships inherent to the proposed model.

(5) ANOVA was used to analyse the differentiation of customer satisfaction on the premise of different flow clusters.

(6) Multiple regression analysis was used to investigate the relationship between value added service satisfaction and the other constructs within the model.

(7) Multiple regression analysis was done to investigate the relationship between relationship quality and customer retention.

1.7.1. Context

The study was conducted at Intekom, a wholly owned subsidiary of Telkom SA. Intekom deliver both consumer and corporate Internet services. The scope of the empirical testing will be limited to consumer Internet services as supplied by Intekom.

In the Internet industry, where the cost of acquiring new subscribers is very high, margins low and future value accounting is an accepted business practice, subscriber retention is key to a profitable business model and thus an excellent experimental case.

1.7.2 Operational definitions as theoretical foundation of the study

Service quality:
Service quality is the measure of service performance required versus service performance delivered to a subscriber. Service quality is not easy to measure due to the intangible nature of services. Other characteristics of services are also discussed in order to position service quality within the services marketing literature. A brief overview of total quality management and total quality of service management is given in order to differentiate 'quality management' for products and services. (See Chapter 2 for more detail)

Service blueprinting:
Blueprinting provides an objective, visual and quantitative method for describing service systems down to the lowest level of detail. Through blueprinting, all parties involved in services marketing, management and planning can gain greater awareness of the complexities of service systems. Common ground for communication and a mechanism for capturing and sharing information across functional an organisational lines on an ongoing basis can help improve decisions and actions. One of the most difficult aspects of dealing with a service is describing it. (See Chapter 2 for more detail)

Customer satisfaction:
Customer satisfaction is a holistic judgement of the total service experience that a subscriber has with the service provider. Customer satisfaction is the combined measure of various service engagements across multiple timeframes. It thus provides for a more stable construct over time than service quality, which is more incident driven. (See Chapter 2 for more detail)

Internet satisfaction:
During the service blueprinting process, three main constructs were defined as the core of Internet utilisation. These constructs are:

(1) Communicating on the Internet: Interacting or sharing meaning directly with an identifiable human interface.
(2) Surfing on the Internet: Interacting directly with an automated response interface based on server software architecture.
(3) Transacting on the Internet: Conducting a monetary transaction using the Internet as transaction channel and/or delivery mechanism. (See Chapter 1 for more detail)

Relationship quality:
Services researchers from the early 1980's have drawn attention to the need to retain, as well as attract, customers. Relationship marketing recognises the value of current customers and the need to provide continuing services to existing customers so that they will remain loyal. Since the late 1980's, even

more research has been directed at customer retention issues. It seems to be very difficult to create service encounters in which customers perceive gains relative to their current satisfaction levels–thereby inducing them to stay longer with their service provider. Instead, service encounters seem to act as 'triggers' that can lead to the termination of a provider-customer relationship (Fisk *et al.*, 1993:61-103). (See Chapter 4 for more detail)

Core and value added services:
The core service of a company is the core deliverable that a subscriber buys. In the case of an Internet Service Provider, the core is the retailing bandwidth. Bandwidth is the 'carrier' of Internet traffic. The value added services enables a 'Internet experience', a cluster of services, around the bandwidth core.

Examples of value added services are telephonic customer support assisting in configuring an Internet connection and an e-mail account in order to utilise the Internet as an effective communication tool. Value added services will be investigated as a potential driver of service quality, customer satisfaction and relationship quality. (See Chapters 3 and 4 for more detail)

The Flow construct:
In the relationship marketing literature, mention is made of psychological bonds that people develop with a service. These bonds are 'healthy' ways of building loyalty with subscribers. In this study the 'FLOW' construct will be investigated as a potential profiling construct related to customer satisfaction. In other words, is higher Internet literacy associated with customer satisfaction?

The Flow construct enables the classification of subscribers according to different psychological states. Examples of these states include boredom, anxiety, indifference and flow. Flow is associated in the literature with a high level of positive affect. The classification occurs on two axes, namely challenge and skill level, that the subscriber experiences while engaging in the service. (See Chapter 2 for more detail)

1.8. Overview of the chapters to follow

Chapter Two provides a literature synopsis around the marketing of services in order to enlighten the service quality and customer satisfaction constructs. The service quality discussion begins by defining service quality, then contrasting service quality and goods quality, thereafter investigating the GAPS model in order to create context for the SERVQUAL instrument that is utilised for the measurement of perceived service quality.
Customer satisfaction measurement is then further explored as well as the Flow construct, continuos service delivery and service blueprinting.

In Chapter Three, the focus turns to relationship issues. An investigation of relationship marketing constitutes an introduction for issues pertaining to loyalty and relationship building. Special attention will be given to the role of technology in relationship marketing.

Chapter Four focuses on the literature substantiation of the conceptual model – service quality leads to customer satisfaction, which in turn leads to relationship quality. The underlying dynamics of these relationships are also discussed in order to present the dynamic nature of relationship quality.

Chapter Five is the methodology chapter. The instrument as well as sampling and collection are presented in this chapter.
Attention then turns to multivariate analysis. Multiple regression and factor analysis is covered. Structural equation modelling is then investigated as analysis technique for the core relationships proposed in this study.
The selection of techniques for analysis as well as a structured approach to multivariate analysis is presented.

Chapter Six encapsulates findings and recommendations with academic and practical implementation perspectives.

1.9. Summary of chapter 1

The Internet industry in South Africa is an extremely fast growing industry. As the cost of acquiring new customers becomes higher, competition intensifies and as the market becomes more saturated the focus moves towards future revenue from existing customers.

With a base line understanding of the Internet and consumer Internet services attention will now shift towards service marketing/management and relationship marketing/management as potential enablers of customer longevity.

In the next chapter service quality, customer satisfaction and service blueprinting within the domain of services marketing will be discussed.

Chapter 2
The Marketing of Services

Literature Study	**Internet Services** **The Marketing of Services** Relationship Marketing Interrelationships between constructs
Methodology	Survey and Analysis
Qualitative Findings	Visualisation of Internet Service provision Service breakpoints (Fail Points)
Quantitative Findings	SERVQUAL Interrelationships between constructs
Recommendations	Defining a portfolio of projects
	Academic recommendations

This chapter will cover the following topics in order to enlighten the concept of Services Marketing:

(1) Defining service quality. Because of the characteristics of services it is hard to define what is meant by quality.
(2) One of the easiest ways of understanding service quality is comparing it to product quality.
(3) Total quality of service is different from the traditional total quality management. Different initiatives and implementation frameworks exist.
(4) Different shortfalls (Gaps) exist within a service organisation that can lead to a gap between what customers expect and what they receive.
(5) The SERVQUAL instrument is proposed as a measurement instrument for the measurement of the expectation versus experience gap.
(6) Customer satisfaction is based on current and historical perceptions of service quality and is a cumulative judgement of service delivery over time.
(7) The flow model will be linked to customer satisfaction through the findings of researchers who propose that flow is associated with positive affect.
(8) Core and value added services are reviewed in order to overcome the possibility of myopia.
(9) Service blueprinting and the value thereof are reviewed as a qualitative way of understanding the service design as the 'product' of service organisations.

During the past decade, services marketing and specifically customer satisfaction, as a sub-division thereof, service quality measurement and theory grew in importance (Berry and Parasuraman, 1993:13-59).

Service quality is the area that has been subjected to the greatest amount of research in service marketing (Fisk and Bitner, 1993:77).
The service quality paradigm lead to a more customer-centred approach to doing business (Hendricks, 1997).

2.1. The Meaning of Service Quality

Quality has been defined in ISO 8402 as "The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". Other definitions are 'fitness for purpose', or 'satisfying customer expectations' (Monnet, 1995).
Researchers and managers of service firms concur that service quality should be a comparison of expectations with performance. Quality evaluations should involve not only the final outcomes, but also the service processes.

Table 2.1 Important views in defining service quality.

Year	Important views
1982	According to Gronroos (1982), two types of quality exist; technical quality, which involves what the customer is actually receiving from the service, and functional quality, which involves the manner in which the service is delivered. Since 1982, quality has been seen as having three dimensions; physical quality (physical aspects of the service such as the office), corporate quality (the company image or profile), and interactive quality (interaction between contact personnel and customers).
1983	Service quality is regarded as a measure of how well the service level delivered matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis.
1987	Quality is the consumer's judgement about an entity's overall excellence or superiority, which differs from objective quality.
1990	According to the confirmation-versus-disconfirmation theory, quality is determined by the level of fit between customer expectations of the service and the perception of the actual service performance. Meeting or exceeding the expectations results in customer satisfaction. If there is a gap between expectations and experience, cognitive dissonance leads the customer to cease patronising the service. It is proposed that customers are the sole judges of service quality.
1991	Parasuraman, Zeithaml and Berry (1991) saw quality as a form of attitude, which results from incidents of satisfactory transaction over time. Expected quality is the desires of consumers, what they feel a service provider should offer rather than would offer.

In the services industry, the delivery of a high quality service is essential to guarantee a company's survival through differentiation. The increase of profits and market-share can also be accentuated as advantages of a higher quality service (Schmenner, 1986:21-26). The client defines quality in the current business environment. Mechanisms must be established to gather information related to the client's perception of quality (Teas, 1993:18-34).

There is a link between quality, client retention and profitability. This is not surprising–customers who are satisfied with the quality of the service are more likely to be loyal to the firm. To move someone from customer to advocate one needs to go a step further and replace customer satisfaction with customer delight by offering service quality that exceeds expectations (Payne, 1994:29-31).

2.1.1. Goods Quality vs. Service Quality

A profound difference exists between the knowledge frame of goods and services with regards to quality because of distinctive characteristics:

(1) Services are intangible. They are performances rather than objects. Specifications for uniform quality can rarely be set. The customer criteria to evaluate service quality may be complex and difficult to capture precisely. However, the only criteria that really count are the customers. Only they can judge quality. "Precise-manufacturing specifications can seldom be set for services." Due to service intangibility, a company may find it more difficult to understand how consumers perceive services and services quality (Lovelock, 1991:7).

(2) Services are heterogeneous. Their performance often varies from provider to provider, from customer to customer, from day to day. The quality of a provider's interactions with a customer can rarely be standardised. Consistency of behaviour from service personnel is difficult to assure. Quality is therefore highly dependent on the performance of employees; an organisational resource that cannot be controlled to the degree that components of tangible goods can be engineered (Lovelock, 1991:7).

(3) Service production and consumption are inseparable. Quality often occurs during the time of delivery rather than being engineered at a manufacturing plant and delivered, intact, to the customer. Customers are often present and evaluate the service during the design, production and delivery processes. That is, customers do not evaluate service solely on the basis of its outcome, but also on the processes used. Quality can only be established and evaluated once the delivery of the service to the client has taken place. Service companies may further have less control over quality when consumer participation is intense, since the client also affects the service process (Lovelock, 1983:9-20).

(4) Perishability (services cannot be inventoried) is also cited as a differentiator between the marketing of goods and services (Ziethalm *et al.*, 1985:33-46; Hendricks, 1997).
(5) The time factor is critical. Many services are delivered in real time. There are limits as to how long customers are willing to wait for a service to be provided. (Lovelock, 1991:8)
(6) Different distribution channels exist for services than for products. Service providers may have to manage customer contact that within a product company would have been contracted out to intermediaries. Consumption behaviour might also have to be managed like for example in a restaurant where customer's behaviour could irritate other customers present at the same time. (Lovelock, 1991:8)

Three additional themes must also be included in the differentiation of service quality:
(1) Service quality is more difficult for a client to assess than goods quality.
(2) Service quality perceptions spawn from the comparison of the client's expectations with true service effectiveness.
(3) The effect of services as well as the evaluation of the process of service delivery plays a role in the quality evaluation of services (Hendricks, 1997).

"Poor quality places a firm at a competitive disadvantage. If customers perceive quality as unsatisfactory, they may be quick to take their business elsewhere" (Lovelock, 1991:365).

2.1.2. TQS versus TQM

Although TQS and the 'older' TQM do have similarities in terms of manufacturing, there are certain differences between the two:

(1) One of the major differences between TQS and TQM is tangibility. Manufacturing produces a tangible product; usually matching a well-defined specification that all those concerned have agreed will meet customer requirements. In services, measurement of quality deals not with well-defined specifications, but with the perceptions of the customer. Perceptions are fickle and not only vary from customer to customer, but can also vary in terms of the same customer at various times (LOGIC web-site, 1997).
(2) Another difference between TQS and TQM is timing. Manufactured products can be demonstrated and produced preceding demand, and inventories stored in a warehouse. Services, on the other hand, are often produced, sold and consumed simultaneous with demand.
(3) The form of products between TQS and TQM also differs. When striving for quality in manufacturing, companies strive for absolute standardisation and conformance, or at least strive for some sort of

uniformity. Things are made to fit a specification identified earlier. Services, on the other hand, strive for diversity in meeting highly variable customer expectations and those varying perceptions. Service customers are also in a position to experience the process of producing the outcome, even if there is a manufactured product associated with it (LOGIC web-site, 1997).

The Action Plan for TQS:
It is proposed that the TQS journey starts with the REACH concept and is implemented through the EDGE process. The action plan is indeed a mix of TQM and many important concepts in services marketing, such as gap analysis, internal marketing and a service culture.

In order for companies to sustain their competitive advantage through excellence in service, the service culture must be founded on five pillars– Research, Empowerment, Acknowledgement, Communication, and Help (LOGIC web-site, 1997).

(1) Research: The organisation must first research the needs and beliefs of its external customers and internal customers (such as employees).
(2) Empowerment: Everyone in the organisation, from top to bottom, must be given the power to develop and maintain a service culture in their daily work.
(3) Acknowledgement: Management must set the standards of service excellence that its customers (as well as employees) demand.
(4) Communication: The standard must be communicated to everyone in the organisation, so that they are all focusing in the same direction.
(5) Help: The quickest and most effective way to help employees understand and appreciate the importance of service excellence is to train them and reward them.

The EDGE process is a practical arm of REACH. It consists of four stages – Evaluate, Design, Guide, and encourage Excellence. The service EDGE is an interactive and flexible process geared toward encouraging management and staff to take an active part in creating and maintaining a service culture, both internally and externally (LOGIC web-site, 1997).

(1) Evaluate: The first step is to perform an internal and external review of the organisation. This serves to compare the current service performance with the best practices of others as well as shortfalls on expectations held by clients. The comparison and evaluation will reveal the service quality gaps, 'Figure 2.1' as described in the gap model below (Berry *et al.*, 1988).
(2) Design: The gaps are reviewed to determine what has caused them. The current service delivery chain is mapped, service relationships between departments determined, gaps highlighted, and cost-of-service impact analyses performed. Through the workshop approach,

employees groups find ways to close the gaps and report to the management for approval. The approved improvements are ranked in order of importance and assembled into a company-wide service implementation plan. Any operational change will be framed within a strategic service vision, a vision to out-think the competition rather than to match them.

(3) Guide: The third step is to put the plan into action. Communication processes are streamlined. Quality teams are empowered. Training is developed and delivered. Performance measures are put in place. The goal is to ensure that a climate of change is felt throughout the organisation.

(4) Encourage Excellence: The integration of service excellence in an organisation is complete when it results in lasting improvements to the business process. Excellence should be fairly rewarded and quality teams should meet regularly. The entire organisation should stay on top and keep up with ever changing customer needs (LOGIC web-site, 1997).

People are always the central theme in quality improvement, while technology gives people the tool to maintain or improve quality.

The 'Right Things Right' grid–derived from Deming's 'doing things right the first time' attitude also provides an insightful view of quality improvement (Table 2.2). The grid is a simple way to look at the work that people do from different angles. The first angle is how people do the work they do. People either do things right or do things wrong. The second angle has to do with what work people actually do, doing the right things or the wrong things. When combining these two, there are four possibilities:

Table 2.2. The 'Right Things Right' grid.

	Do things right	**Do things wrong**
Do the right things	Add Value	Quality problems
Do the wrong things	Thing's that don't matter to customers or the company	Real waste of time

(LOGIC web-site, 1997.)

- Doing the right things right, the only grid that adds value to company and its customers.
- Doing the right things wrong, quality problems.
- Doing wrong things wrong, a real waste of time.
- Doing wrong things right, things that do not matter to customers, internal or external, but doing a good job for them.

Reliability is at the heart of excellent service. The flip side of 98% reliability is two percent unreliability, and more than likely, the actual 'cost' of two percent unreliability is higher than the cost of improving 98% reliability,

which includes lost customers, unfavourable word-of-mouth, and redoing services not done properly the first time. If companies were to investigate the primary causes of service unreliability, they would find most problems rooted in poor service design, inattention to service details, and basic carelessness. These are problems that cannot be solved by throwing money at them.

Building a 'Do it Right First' Attitude–Companies should use every opportunity to build a 'do it right first' attitude. This means specifically addressing the reliability issue in company communications. This is achieved by including mission statements; setting reliability standards; teaching the why and how of reliability in training programs; appointing action teams to study specific services and recommend ways to improve reliability; measuring error rates; and rewarding error free service. One of the most important opportunities for improving reliability involves analysing services for 'fail points'–the service process most vulnerable to mishap. Identifying fail points focuses attention on the need for special training, additional inspection, building in corrective sub-processes, or even redesigning the original process (LOGIC web-site, 1997).

2.1.3. The Gaps Model

Parasuraman *et al.* (1993) proposed a conceptual model of service quality based upon an exploratory investigation with consumers and executives from selected service fields (Figure 2.1). The model indicates that consumer's quality perceptions are influenced by a series of four distinct gaps occurring inside the organisations (gaps 1 to 4).

Perceived service quality is defined as the difference between consumer expectations and perceptions (gap 5), which in turn depends on the size and direction of four gaps associated with the delivery of service quality on the side of the marketer.

In their exploratory research, they revealed that consumers used ten key criteria in evaluating service quality, including reliability, responsiveness, competence, accessibility, courtesy, credibility, security, keeping the customer informed, knowing the customer, and tangibles (physical evidence of service). They also proposed that consumers typically rely on experience properties (attributes which can only be discerned after purchase or during consumption) when evaluating service quality, which include self-experience and others' experience (word-of-mouth).

Their final proposition is that perceived service quality exists along a continuum from ideal quality-when perceived service is much more satisfactory than one expected, satisfactory quality, where perceived quality equals expected quality, to totally unacceptable quality-when perceived service is much less satisfactory than one expected (Hendricks, 1997).

The four potential shortfalls, or gaps, within the service organisation that may lead to a gap between what customers expected and what they receive (gap 5) are:

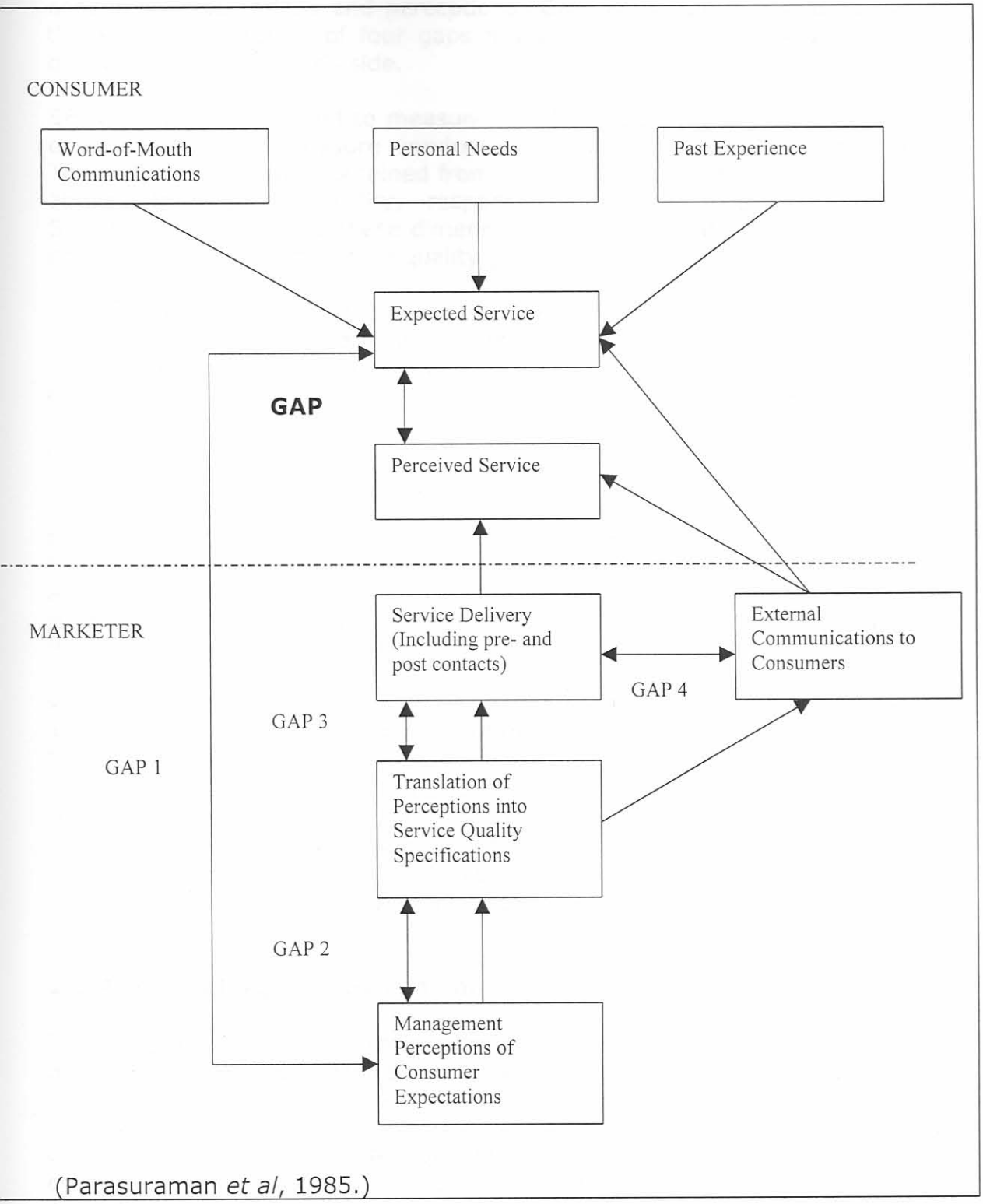
Gap 1: Differences between consumer expectations and management's perceptions of consumer expectations; thus the discrepancy between what the customer wants and what management thinks the customer wants.

Gap 2: Differences between management's perceptions of consumer expectations and service quality specifications.

Gap 3: Differences between service quality specifications and the service actually delivered.

Gap 4: Differences between service delivery and what is communicated about the service to consumers; thus the discrepancy between service promised and service provided.

Figure 2.1. The Gaps model of service quality.



(Parasuraman *et al*, 1985.)

Perceived service quality is defined in the model as the difference between consumer expectations and perceptions (Gap 5), which in turn depends on the size and direction of four gaps associated with the delivery of service quality on the marketer's side.

SERVQUAL was designed to measure Gap 5. The SERVQUAL scale serves to operationalise and measure service quality along five distinct dimensions. These dimensions were obtained from refining the ten dimensions mentioned above; tangibles, reliability, responsiveness, assurance and empathy. SERVQUAL scores along these dimensions can be viewed as indicators of the construct of perceived service quality (Lovelock, 1991:420).

The benefits of quality improvements come in two forms:
One effect is the improved ability of the firm to attract new customers, due to word of mouth, as well as the firm's ability to advertise the quality of its offerings. This effect is in many ways analogous to product repositioning, and is part of 'offensive marketing,' those actions which seek to attract new customers.

The second result of improved quality is that when current customers are more satisfied with the products they buy, they become repeat customers. Small increases in retention rates can have a dramatic effect on the profits of a company. Retaining current customers through higher levels of satisfaction is referred to as 'defensive marketing' (Schneider and Chung, 1996:65-80; Burger and Cann, 1995:91-98).

Rust, Zahorik and Keiningham (1997) defined the relationship between service quality improvements and profitability:
"We model the relationship between service quality improvement efforts and profitability as a chain of effects. The improvement effort, if successful, results in an improvement in service quality. Improved service quality results in increased perceived quality and customer satisfaction and perhaps reduced costs. Increased customer satisfaction in turn leads to higher levels of customer retention, and also to positive word-of-mouth."

2.1.4. The SERVQUAL Instrument

The SERVQUAL scale is a concise multiple –item scale with good reliability and validity that companies can use to better understand the service expectations and perceptions of their customers. The instrument is designed to be applicable across a broad spectrum of services. The skeleton questionnaire can be adapted or supplemented where necessary to fit the characteristics or specific research needs of a company (Lovelock, 1991:367).

Customers assess service quality by comparing what they want or expect to what they actually get or perceive they are getting (Berry *et al.*, 1988; Candlin and Day, 1993:133).

Knowing what the customers expect is the first and probably the most critical step in delivering quality service (Hendricks, 1997). The prime determinants of expected service quality, as suggested by Zeithaml *et al.* (1990), are word-of-mouth communications, personal needs, past experiences, and communications by the service provider to the subscriber. Subscribers talk to each other and exchange stories about their relationship with the ISP. These conversations are a factor in fashioning subscriber's expectations of the ISP's service. Subscriber's personal needs influence their expectation of the ISP. A business users need for urgency may differ depending on whether he or she has a urgent information or communication task a day before an annual presentation, or simply wants to surf the Web for leisure. Of course, prior experience is a key moulder of expectations. Subscribers may adjust or raise their expectations based on previous service encounters. For instance, subscribers who find that the toll free help desk frequently solves their problems are likely to expect answers to future problems. The factors just discussed all relate to expectations that originate with the user (Pitt, L.F. Watson and Kavan, 1995).

SERVQUAL's items measure the core criteria of service quality. It transcends specific functions, companies, and industries. It is suggested that context-specific items may be used to supplement the measurement of the core criteria (Pitt *et al.*, 1995). Core service measurement borrowed from network quality literature will be added as the core service measurement for this study. "Improving quality in the eyes of the customer is what pays off" (Lovelock, 1991).

The instrument has been tested to include all the variables outlined in the service blueprint. This validation was executed by assuring that the 5 SERVQUAL dimensions encompass the full service design. Assuring that the measurement of service quality encapsulates the methods, processes and evidence of the service delivery process is important because it adds both relevance and objectivity to the measurement (Parasuraman *et al.*, 1993:140-147).

Table 2.3. The five primary criteria for the evaluation of service quality.

Tangibles – Appearance of providers physical facilities, equipment, personnel and communications materials.
Reliability – Ability to perform the promised service dependably and accurately.
Responsiveness – Willingness to help customers and provide prompt service.
Assurance – Knowledge and courtesy of providers and their ability to convey trust and confidence.
Empathy – Approachability, ease of contact, listening, keeping customers

informed and making effort to know customers and their needs- caring, individualised attention the company provides its customers. (Zeithaml *et al*, 1990.)

Assessing the quality of service using SERVQUAL involves computing the difference between the rating customer's assign to the paired expectation perception statements.

THUS: SERVQUAL Score = Perception Score – Expectation Score.

By examining these various gap scores a company can not only assess its overall quality of service as perceived by customers but also identify the key dimensions, and facets within those dimensions, on which it should focus its quality improvement efforts (Andrew Fletcher Consulting, 1996).

From extensive research, Zeithaml, Berry and Parasuraman concluded that customers ranked the importance of two SERVQUAL dimensions consistently, regardless of service industry. Reliability is the most important contributor to service quality and tangibles are the least important (Nitecki, 1997).

SERVQUAL is an appropriate instrument for researchers seeking a measure of IS service quality. The role of the IS department within an organisation has broadened considerably over the last decade. Initially it was a developer and operator of information systems, but the IS department now has a much broader role. The introduction of personal computers has resulted in more users of information technology interacting with the IS department on a more frequent basis. Users expect the IS department to be of help to them with a range of tasks, such as hardware and software selection, installation, problem resolution, connection to LANs, systems development, and software education. Facilities such as the information centre and help desk shows this enhanced responsibility. IS departments now provide a wider range of services to their users. Their roles have broadened from product developers and operations managers to service providers. Current IS success measures, product and system quality, focus on the tangible end of the spectrum. Pit LF *et al* 1995 argue that service quality, the other end of the spectrum, needs to be considered as an additional measure of IS success (Pitt *et al.*, 1995).

2.2. Customer Satisfaction

Satisfaction is a customer's post-purchase evaluation of a product/service offering. A customer is satisfied when an offering performs better than expected and is dissatisfied when expectations exceed performance.

Customer satisfaction/dissatisfaction is modelled as a function of disconfirmation arising from discrepancies between prior expectations and actual performance. Hence, a simple model of the antecedents of customer satisfaction with a service offering can be expressed algebraically as:

CS/Dt = f(Disconfirm(t), Perform(t), Expect(t-1).

In other words, a customer's satisfaction/dissatisfaction with a service offering at time (t) depends on his or her current perceptions of performance Perform(t), prior expectations about performance Expect (t-1) and perceptions of the discrepancy between these two constructs Disconfirm(t) (Bolton and Drew, 1991).

As previously stated, Internet connectivity is a continuously provided service with a membership type relationship. Because of the similarities between the Internet subscription model and the telephone subscription model the following section borrowed from the telecommunications industry is contextualised.

It is proposed that customer responses for continuously provided services or long lasting goods are characterised by passive expectations, and that disconfirmation will not operate unless service changes occur that are outside the range of experience based norms. Because telephone service is a continuing service, these notions suggest that customer responses for telephone service should be affected only by performance evaluations (Bolton and Drew, 1991).

Local telephone services are different from many other products/services due to it being regulated; prices are not free to fluctuate and the service has no direct competitor in franchised areas. Because it has a long history as a stable and well-established, nearly universal service, most customers have a very clear idea that is based on prior experience, of what constitutes traditional telephone service. For example, customers satisfaction with local telephone services may decline when the company drops free telephone repair (as occurred during deregulation), or when the customer moves from one local franchise to another. Consequently, a customer's satisfaction with local telephone service should depend on (favourable or unfavourable) disconfirmation of anticipated performance levels only when a service change occurs which is outside the range of experience-based norms.

Because telephone service provision and usage are continuous, a customer can easily form an assessment of performance, and it is readily available for incorporation into an evaluation of satisfaction. Therefore, current performance levels should have a direct effect on customer satisfaction, as well as an indirect effect via disconfirmation.

In the CS/D paradigm, expectations typically are defined as anticipated or predicted levels of product/service performance formed by advertising, word-of-mouth, or past experience. Exploratory research on customer expectations about telephone service confirmed the idea that expectations about a continuing service are not processed actively. Perhaps customers do not explicitly conceptualise expectations about service because telephone service is characterised by its stability. This model postulates that customer

satisfaction with local telephone service is not affected directly by expectations, but only indirectly through disconfirmation (Bolton and Drew, 1991).

The similarities of telephone and Internet services exist on the core service dimension earlier defined as network connectivity.

2.3. The Flow Construct

As hypothesised in Chapter 1 the psychological construct flow will be analysed as a profiling construct for customer satisfaction:
"Positive affect and exploratory behaviour are outcomes of flow" (Yung, 1997:1-14).

A profiling construct within this context is a construct that can be used in order to micro-segment or profile customers into different groups where meaningful differentiation in communication in service is required. If it is found that the flow construct does differentiate between different customer satisfaction groups the Internet service provider can, based on the analysis of a short set of questions, try to 'manipulate' behaviour into the flow-state.

An example would be to educate a customer in Internet service utilisation where the customer currently experiences anxiety with the Internet experience.

One suspects that the highest and the most sustainable levels of customer satisfaction occur for products and services that are either the objects of intrinsic desires, or are facilitators of fulfilment of intrinsic desires (Dimanche and Havitz, 1995). The firm transforming mimetic desires into intrinsic ones or designing products better meeting intrinsic desires may find a new route to competitive advantage (Bagozzi, 1995:272-277).

One can assume that when people indicate that they are engaging in something they perceive as 'leisure', the use of the label acts as a form of 'short-hand', signifying ongoing conscious experiences consisting of a unique set of perceptions, feelings and satisfactions. The experiential dimension of leisure most commonly agreed upon is positive affect. The leisure experience also has been conceptualised as similar to a variety of highly involving psychological states. Of these, the 'flow' model has had the greatest influence on theorising about leisure experience. The flow experience is described as "one of complete involvement of the actor with his activity", and a number of elements has been identified that are indicators of its occurrence and intensity.

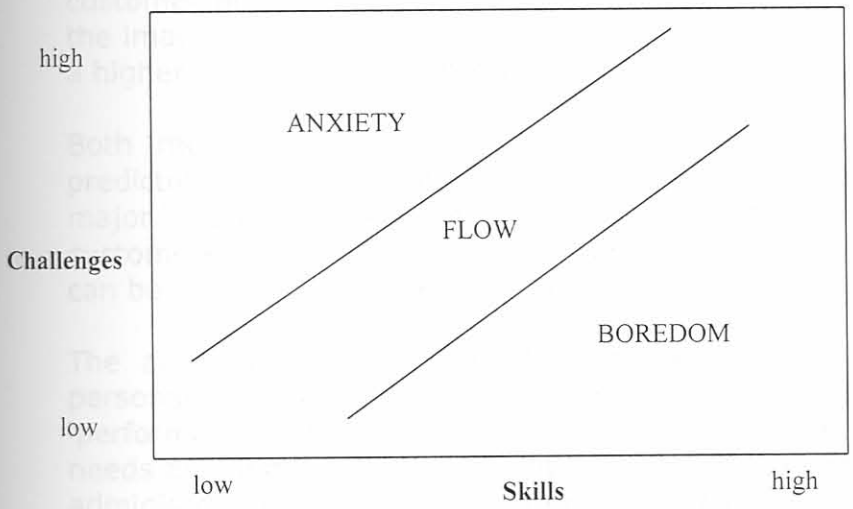
These indicators include the perception that personal skills and the challenges provided by an activity are in balance, centring of attention, loss of self-consciousness, unambiguous feedback to a person's actions, feelings

of control over actions and environment. Further indicator are momentary loss of anxiety and constraint, and the enjoyment or pleasure (Manell, Zuzaneck and Larson, 1998:289-304).

According to Manell *et al* (1998), Csikszentmihalyi, during 1975, conceptualised flow as an optimal experience that stems from peoples perceptions of challenges and skills in given situations. Situations in which challenges and skills are perceived to be equivalent are thought to facilitate the emergence of such indicators of flow as positive affect and high levels of arousal, intrinsic motivation, and perceived freedom.

In flow model, experiences in which both challenges and skills are congruent it is coded as 'flow' experiences. High challenge - low skill experiences, are considered to be 'anxiety' experiences, and experience with high skills and a low challenge are classified as 'boredom' experiences (Figure 2.2). (Manell *et al.*, 1998:289-304).

Figure 2.2. The Flow Model.



(Ellis, Voelkl and Morris, 1994:337-356.)

2.4. Core and Supplementary/value-added services

With the service sector becoming more competitive the need for meaningful competitive differentiation is sharpened. To an increasing degree this differentiation is dependent on higher performance on supplementary product elements. Both service and manufacturing industries, the core product sooner or later becomes a commodity as competition increases and the industry matures. As a result competitive advantage usually emphasises performance on the supplementary service elements. It is also stated that a firm who does not deliver on the core service will go out of business. To be competitive thus means that the Internet service provider must focus on the

supplementary services in addition to the core service, which tends to become a 'hygiene' factor.
It is also important to note that different elements of the augmented service offering have different roles and levels of importance (Lovelock, 1991:19).

Although relationship marketing adds value to the service package, it is not a substitute for having a strong, up-to-date core service. Two main views of relationship marketing can be compared. One view, relationship generalisation, is consistent with economists' assertion that the relationship is a quality surrogate and that buyers generalise positive feelings about the provider to core aspects of the service. The other, rational evaluation, is that relationship marketing adds value to the service by providing certain demanded 'peripherals' but buyers mainly care about core service quality and consider evidence from a variety of sources (including competitors) in their evaluations (Crosby and Stephens, 1987).

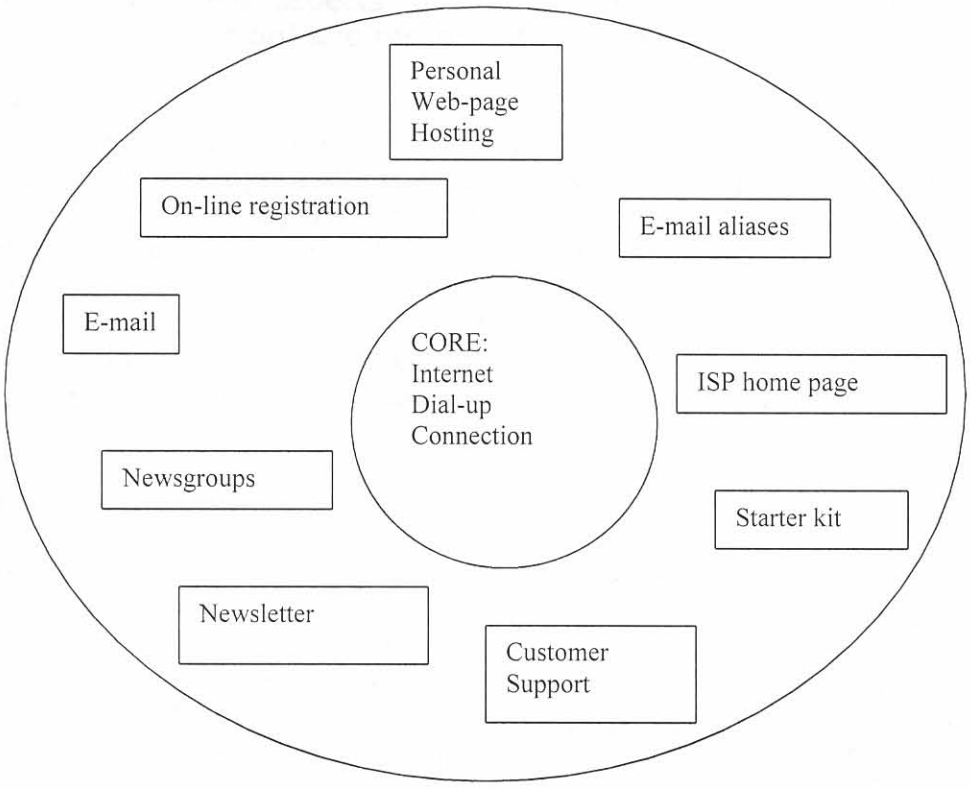
The service literature distinguishes between the quality produced as the customer interacts with the contact resources of the organisation, what the customer actually gets as the result of the interaction (core elements), and the image of the company. The three satisfaction levels are believed to have a higher order relationship with the SERVQUAL dimensions.

Both models contain the same interaction/communications variables as predictors of satisfaction. These variables are conceived as representing the major 'information flows' providing clients with evidence of service quality. As customers expect requests to be handled efficiently and effectively, failures can be very damaging to a relationship.

The authors also discusses the rational evaluation model and finds that personal contact adds value to the service by providing additional 'performances' that increase the utility of the service. Examples include needs assessment, buyer education, problem-solving assistance, and help on administrative matters. If effective, these interactions should enhance satisfaction with the contact person (directly) and overall satisfaction (indirectly).

To remain competitive, organisations must continually amplify or enhance their value-added package (Figure 2.3). This is the key to relationship marketing, organisations do not sell products alone. The bundle of benefits that the firm puts together is what keeps the customers for life (Kotler, 1992:50-52; Caruso, 1992:21-22).

Figure 2.3. The Suggested Whole Product Design for Consumer Internet Services.



The core service definition of an ISP is to generate revenue from Internet connectivity subscribers, thus retailing bandwidth to consumers. ISP's achieve this by selling an Internet experience to consumers.

Value added services are focussed on luring clients as well as retaining clients through making their Internet experience more valuable. Providing additional enablers in aid of communication, surfing or transacting raises the value of the Internet experience.

2.4.1. Internet connectivity as core product

Internet connectivity translates in essence to network connectivity, utilising the IP protocol within a PPP connection as described in Chapter one. An investigation of literature around network service quality highlighted three core dimensions:

(1) The speed of an Internet connection.
(2) The reliability of a connection.

(3) The availability of a connection.

These dimensions were constructed from the following network quality parameters:

Availability:
There are two different aspects of network availability: network uptime (availability of a connection) and response time (speed).

Reliability:
A reliable network is one in which errors are absent and failures are a rare occurrence. Error-free operation is attained by designing transmission links with low noise levels and by using protocols with effective error detection and correction schemes. Response time can increase (speed decrease) if extensive error checking and correction are performed at each node in the network. High-speed protocols such as frame relay rely exclusively on end-to-end error detection and correction because it is assumed that the underlying transmission lines are reliable and have relatively low noise levels.

Security:
The essence of telecommunication security operations is managing and controlling access to equipment and facilities and to the network and its information databases. The crux of the security problem is providing simple and inexpensive access on a wide-reach basis (ideally from anywhere) while protecting the physical facilities from harm and sensitive information from unauthorised users. The PPP protocol does not have security functionality on the network level. The PPTP tunnel protocol does have security embedded but it is not part of the consumer services relevant to the scope of this study.

Accessibility:
Network design should incorporate the key aspects of accessibility appropriate to a consumers need: simple and convenient access procedures, flexibility in the times and locations of permissible access, and no need for special equipment to access the network (Keen and Cummins, 1994:585 – 590).

2.5. Service Blueprinting as Foundation for Qualitative Service Quality Analysis

Service blueprinting is a mapping technique designed to fully and accurately portray any service system in its entirety so that the system can be understood objectively and dealt with on the same basis by different people, irrespective of their individual points of view. Service blueprinting has its origins in a wide variety of disparate fields and techniques, all of which have to do with the explanation and definition of processes because processes are the fundamental building blocks of all services. Blueprinting draws

importantly from three fields; logistics, decision theory and computer system analysis.

Booms and Bitner (1981) mentioned that the service marketing mix must be expanded to encompass amongst other elements the process of service delivery. They define this component as "the actual procedures, mechanisms, and flow of activities by which the service is delivered". This new element is essential to the definition and promotion of the service in the customer's eyes, both prior to and during the service experience. It can be used by the firm to influence buyer's responses and rightfully belong to the marketing mix.

There are four risks associated with using words to describe a service that led to the endorsement of service blueprinting as service delivery and design communication tool:

(1) The first risk is oversimplification. Words are not precise enough to accurately and completely describe an entire service system. And a description that is abstract is useless for management purposes.
(2) The second risk is that of incompleteness. A spoken or even written description of any service is likely to ignore or gloss over those parts of the service with which the author or speaker is least familiar.
(3) The third problem is subjectivity. An individual's understanding and knowledge of any service is always conditioned and biased by his/her own personal experiences and exposure to that service. Often these are projected onto the service.
(4) Finally, words are subject to interpretation. No two poets define 'love' in the same way. Even the most artful writer or speaker is hampered by the impressionistic nature of words and the unknowable effect the may have on the reader or listener. For all these reasons, a more scientific, more objective method of explicating services should be part of every marketer and manager's arsenal.

2.5.1. The Value of Service Blueprinting

When people attempt to blueprint a service system, they are forced to learn more about that system and forced to confront how little they actually know about the functioning of the entire system. Blueprinting also draws people into learning and thinking about appropriate techniques for visualising, mapping and diagramming processes of all kinds. The effort to visualise the entire system makes one consider the system in a new and more comprehensive way (Pendery, 1998:56-58).

A well-constructed flowchart or blueprint enables the user to visualise the process of service delivery by depicting the sequence of front stage interactions that customer's experience as they encounter service providers, facilities and equipment. These interactions are supported by backstage

activities, which are hidden from the customers and not part of the actual service experience. Each of these front stage activities can be categorised as part of a core or supplementary service element. But it's important to recognise that backstage problems may well have undesirable front stage outcomes. Time lines can be attached to each activity to help set the standards for speed of service (Lovelock, 1991:370; Shostack, 1992:75-90).

Shostack (1984) mentions that blueprinting can be utilised to achieve the following objectives:

(1) Identify problems before they happen
(2) See the potential for other market opportunities
(3) Developing new services
(4) Test the quality of services for which is contracted

"In survey after survey, services top the list in terms of consumer dissatisfaction" (Shostack, 1984:133).

The lack of systematic design and control seams to be the core problem with service delivery. There is no way to ensure quality or uniformity in the absence of detailed design.

A blueprint gives management a context within which to deal with the management and control of the process:

Step 1: Identify processes.
By identifying the components of a step or action, inputs that are needed is revealed and analysis, control and improvement accommodated. It is important to watch out for parts of the service that the consumer does not see, like purchasing of supplies.

Step 2: Isolating fail-points.
Identify points where the system can go awry. The designer must build in sub processes to correct possible errors. The consequences of service failures can be greatly reduced by analysing fail points at the design stage. When designers and managers think through potential problems together in advance, the quality of service execution is invariably higher.

Step 3: Establishing time frames.
The design should establish a standard execution time. The design should also allow for deviation from standard execution time under working conditions. The amount of latitude necessary in the time frame will depend on the complexity of the delivery system.

Step 4: Analysing profitability.
A service designer must establish a time-of-service-execution that precludes unprofitable business and maintains productivity.

The design of a service should incorporate the orchestration of tangible evidence–everything the consumer uses to verify the service's effectiveness. The design should not be carelessly delegated to outsiders or left to chance, the presence of people brings a higher risk that service quality will vary.

Market research throughout the design cycle is the control mechanism to ensure that the service meets the goal as well as measuring quality and identifying needs for redesign. Fail points indicate where the service may experience quality or consistency problems.

Telephone communication, for example, is a component that is not only critical and difficult to control but also one of the most powerful influence of customer perception, since it provides personal contact. To deal with this potential fail point, management can decide to script dialogues for various situations, to train staff thoroughly in communication and response techniques, to establish procedures making certain that calls never went unanswered, and ensure accuracy by logging, recording, and confirming all customers instructions. While the blueprint does not show these processes, the system designer has diagrammed and controlled each one.

A blueprint is more precise than verbal communication and less subject to misinterpretation. Process design is management's responsibility. Leaving services to individual talent and managing the pieces rather than the whole, makes a company more vulnerable and creates a service that react slowly to market needs and opportunities (Shostack, 1984:133-139).

Product positioning translates back to process engineering in aid of reaching a pre determined market segment. The implications of service intangibility, service perishability, production/consumption simultaneity, and consumer participation in service processes as stated in Chapter 1 must be noted (Lovelock, 1991: 148).

The impact of blueprinting can easily influence the way a company does business in regards to management style and customer understanding:

> "Extended service blueprinting looks at companies resources and the way they can improve the capacity to serve. The process involves defining the information required to understand the needs and capabilities of each individual entity, defining the range of activities that customers can expect from customer service reps, and developing ways to monitor diversity" (Logic web-site, 1997).

Service management, is a process of developing tools that enable customer service reps to better diagnose and respond to diverse customer needs. With these tools and an effective monitoring system, the reps "can be truly empowered without management paranoia about losing control". With the extended service blueprint, management becomes "a creative process of creating enabling tools and mentoring employees instead of prescribing, inspecting and disciplining.

Service standards should be preset, where management applies quantifiable means to assess performance statistically and use a detailed blueprint to make sure employees meet those requirements. An employee should wish to deliver the best possible service without the repeated prompting of superiors or the feeling that they must live up to a code of standards (Logic web-site, 1997).

2.5.2. Building a Blueprint

Creating a blueprint begins with developing a 'picture' of the entire service system at an overview level. From this base, each part of the system can then be broken down and blueprinted in greater detail. Services are integrated systems. These systems can be broken down into three basic areas.

(1) Finding the steps, tasks and activities necessary to the rendering of the service, in other words, the service processes.
(2) Identifying he means by which the tasks are executed, typically some combination of people and goods.
(3) The evidence is presented to the consumer, which is everything he/she experiences sensorial that relates to the service.

All service systems can be understood in their entirety by understanding these three elements.

The processes:
Fail points represent tasks that are statistically known to have a high potential error rate. Problem points represent situations, which require diagnoses, judgement and selection among several courses of action in order to achieve resolution. These have been called out at the overview stage because they are areas management wishes to address in particular detail. Many other process issues can be highlighted in a summary blueprint. As is true throughout blueprinting, the symbols one uses to describe the process are less important than ensuring that all parts of the system have been captured.

The means:
A service like counselling may be rendered entirely by a human being. A service like video game entertainment may be rendered strictly by a machine. But most services are rendered by a mix of goods and people. They in turn are supported by various facilitating goods and services. Understanding and identifying all the means by which a service is rendered is critical for two reasons.

(1) A manager faces constant tradeoffs and choices among means. These decisions affect service quality, differentiation and profits, so they

must be made on an informed basis. Substituting computers for people, for instance, is not always the right approach. It depends on the service strategy and what impact a change of means may have on the entire service system.

(2) Different means require different management approaches. As a summary blueprint is developed, it is useful to keep a list of all the means by which each task or step is executed. As the summary blueprint is expanded to greater levels of detail, descriptions and understanding of means will become critical to understanding and analysing quality and productivity.

Evidence:
The inability to physically examine a service creates anxiety. Uncertainty about the results one may get from a service also creates anxiety. Services are non-corporeal and frustratingly elusive. Therefore customers focus on that which is real as a surrogate for that which is not. Like detectives, they deduce the quality, the value and the nature of the service by judging the tangible cues. Evidence is everything the customer can see, hear, touch, taste or smell that helps him/her confirm the existence, execution or nature of the service. Examples of evidence includes the catalogue given to customers, the statements they receive, the box in which goods are shipped, the telephone conversation a customer has when he/she calls are all evidence. Every word and each exchange tells the customer something about the service. People can also be evidence. In the summary blueprint all these forms of evidence appear above a 'line of visibility' that shows which parts of the service system will be encountered by the consumer. These must be managed as a whole in order for the service to have integrity and consistency in the consumer's mind. They must not be allowed to be presented as disconnected or inconsistent pieces.
The summary blueprint is the starting point for understanding the entire service system (Shostack, 1984:133-139).

2.5.3. Personalization versus Standardisation at the Blueprint Level

Blueprinting is a holistic method of seeing in snapshot form what is essentially a dynamic, living phenomenon. For process design purposes, a blueprint should document all process steps and points of divergence in a specific service.

Complexity and divergence are not fixed and immutable. They are factors that can be changed.

In exploring alternative directions for structural change it is important to note the following paradox in Internet service provision:

Reduced divergence leads to uniformity, which tends to reduce costs, improve productivity and make distribution easier. Positively this move can

be perceived as an increase in reliability–more uniform service quality and greater service availability. Negatively such a move can be viewed as lower customisation and limited customer options. Increased divergence leads to greater customisation/personalization and flexibility.
Reduced complexity eases distribution and control while increased complexity can maximise the revenue generated from each customer (Lovelock, 1991: 153).

The more standardised the process is, the more dominating are the core service and the technical quality of the outcome of the production and delivery process and the less difficult it is to manage the personnel from a marketing point of view. Firms can position their strategic approach along the strategy continuum, and the more relationship type strategy is called for, the more that has to be invested in interactive marketing. In such a situation it is at the same time more important to create information systems where the firm is managing its customer base directly and not relying on market share statistics and ad hoc customer surveys (Gronroos, 1995:252-254).

Sometimes, facilitating goods are used as a replacement for human performance to reduce divergence. Computers are the prime example of goods that have been used in this way to standardise service systems. However simplification is not the only use for technology. Technology can also can be used to increase complexity and divergence. Ultimately, technology may even make possible a degree of customisation that only human providers can now deliver.

Coleman (1989) points out that it is important to determine what behaviour constitutes responsiveness and reliability at each level where service is encountered. She goes on to assert that the same behaviour is not always desirable at every level, or between different workgroups. Service quality should be regarded as an interpersonal issue and it must be noted that the cheerful incompetent can be more annoying to a customer than the gruff competent.

2.5.4. Blueprinting within the Context of Continuous Service Delivery

The customer has the opportunity to acquire new information regarding a continuously provided service during service encounters that take place throughout the relationship, when a facilitating transaction takes place or when there is a failure in the organisation's continuous delivery of service.
Facilitating transactions occur when the customer seeks out an encounter with the organisation, typically to obtain information about existing service, purchase additional products, ask about his/her bill, and so forth. Service failures include disruptions in the core service, such as a 'blackout' of electrical service or unscheduled 'downtime' in computing services) and failures in service processes, such as static on a telephone line or a burnt out street lamp.

Service encounters, whether customer initiated or failure initiated, provide the customer with opportunities to acquire new information about the service, compare current service with his/her prior cumulative assessment, and to form a new assessment of the value of future service (Bolton, 1998:45-65).

2.6. Summary of Chapter 2

In this chapter the marketing of services were discussed. The service quality and customer satisfaction constructs were investigated and service blueprinting suggested as a visual technique of service management understanding. Value added services were mentioned as a means of service differentiation.

In the following chapter attention turns to the relationship management/marketing realm in pursuing to strengthen the continues relationship between the customer and the service provider as mentioned in Chapter 1.

Chapter 3
Relationship Marketing Strategy and Relationship Management

Literature Study	**Internet Services** **The Marketing of Services** **Relationship Marketing** Interrelationships between constructs
Methodology	Survey and Analysis
Qualitative Findings	Visualisation of Internet Service provision Service breakpoints (Fail Points)
Quantitative Findings	SERVQUAL Interrelationships between constructs
Recommendations	Defining a portfolio of projects
	Academic recommendations

This chapter will cover the following topics in order to enlighten the concepts of Relationship Marketing and Relationship Strategy:

(1) Defining Relationship Marketing – gaining insight into the elements of the relationship-marketing concept.
(2) The Importance of Relationship Marketing – customer retention has significant financial benefits.
(3) Technology and Relationship Marketing – emerging technologies allows for relationship building activities that were previously unpractical or overly complicated.
(4) The Evolution of Relationship Marketing – Relationship Marketing is an old concept that evolved within the thrust of services marketing.
(5) Relationship Strategy and Management – the fundamental premises of relationship strategy are discussed on a level where it can be implemented by a service organisation.

3.1. Defining Relationship Marketing

Relationship marketing is a rather complex concept, and therefore there is no commonly accepted definition. It is generally agreed that relationship marketing is a customer-centred approach whereby a firm seeks long-term business relations with prospective and existing customers. The following descriptions of relationship marketing should be noted:

✓ Relationship marketing is the process whereby a firm builds long-term alliances with both prospective and current customers so that both seller and buyer work toward a common set of specified goals. These goals are

met by: 1. Understanding customer needs, 2. Treating customers as service partners, 3. Ensuring that employees satisfy customer needs; this might require employees to exercise initiative beyond company norms, and 4. Providing customers with the best possible quality, relative to individual needs (Copulsky and Wolf, 1990:16-20).

- ✓ Effective relationship marketing will lead to the following positive outcomes: A higher percentage of satisfied customers, greater customer loyalty, a perception on the part of a firm's customers that it is offering better quality products.
- ✓ Relationship marketing is a continuous process, requiring a firm to have constant communication with customers to ensure that goals are being met and to integrate the relationship marketing process into its strategic planning, enabling the firm to better manage its resources and meet future client needs (Levine, 1993:232-234).

According to MacStravic (1998), relationship marketing does not merely constitute an extension of vision from transactions to relationships. It also is a shift in emphasis from simply being better than the competition, to delivering greater value to customers.

While there are differing views as to what constitutes relationship marketing, there are two common dimensions; customer retention and process orientation.

Customer retention:
Authorities are in close agreement about the central focus of the customer in the relationship-marketing framework. The retention of customers by building relationships receives top priority in organisations that adopt the relationship marketing philosophy.

Process orientation:
Relationship marketing places emphasis on key business processes that help to retain customers. The organisation and network members comprise key processes such as new product/service generation and customer service. The following are some of the guidelines identified:

(1) Create an obsession for quality internally and in external relationships.
(2) Apply mass customisation concepts and methods to customise standard products/services.
(3) Deploy front-line information systems (Cravens and Piercy 1994:39-53).

"Relationship marketing, where your relationship with your customer enables you to meet their needs better and more profitably, is the oldest form of marketing" (Mitchell, 1998:60-64).

"It's a big task, one that will require the eventual reorganisation of the entire enterprise around learning customer needs and creating the capability to

fulfil those needs quickly and at competitive prices" (Peppers and Rogers, 1998c:27-30).

3.2. The Importance of Relationship Marketing

Customer retention experts argue that if a firm can increase its customer retention by five percent, it will show on the bottom line as an increase of 25 to 100 percent. For example, consider what it would mean if a major transportation company has 64,000 accounts and loses five percent of them each year due to customer dissatisfaction. Five percent would be 3,200 accounts; if each account spent $40,000 per year and the company's profit margin is 10 percent, the company is losing $12.8 million a year due to bad service. Therefore they should spent up to $12.8 million to improve service, especially if they can get to zero defections.

Doing such a calculation is a way to determine how much any organisation should spend to improve its service. Planners can thus calculate how specific reductions in the defection rate will help the bottom line (Kotler, 1992:50-52).

The one-to-one enterprise creates long-lasting, profitable relationships capable of outliving the very products and services the firm may consider its lifeblood. By making itself more and more valuable to each individual customer, moving steadily up the customer's own learning curve, this enterprise is able to drive its unit margins up, despite the push toward commoditisation that characterises nearly every industry today (Levins, 1998:44-52).

The one-to-one enterprise treats different customers differently, remembering each individually, interacting with them to learn their individual needs and then customising products to these specifications. This association between a one to one enterprise and its customer is thus a learning relationship. It is a relationship that gets smarter with every interaction, steadily developing the customer's long-term loyalty as it protects the margins of the company (Peppers and Rogers, 1994:D4 – D7).

The payoff comes after a few such iterations, when the customer will have taught the enterprise how to serve his own particular needs or preferences. At that point, before he can get an equivalent level of service from a competitor–even one that offers the same level of interaction and customisation, the customer must teach this new firm what he has already taught the original one (Peppers and Rogers, 1997:4-7).

Technology firms appear unwilling or unable to see beyond the view of themselves as product companies. Product expertise is important, but products come and go–and so will customers if loyalty is not developed. Marketers think of and treat their customers as indistinguishable entities

because they don't recall the last time they interacted with them much like the way goldfish swim around a bowl always thinking they are in new waters.

One to one marketing has moved from hypothetical to real competitive advantage. Loyalty building is less about getting permission to talk to customers and more about encouraging them to tell you what they want, and being willing to change your processes in order to give it to them (Dennis, 1998:10).

3.3. The Role of Technology in Relationship Marketing

Technological innovations are making it increasingly possible for each firm to have a direct relationship with the people using its products and services. Relationship marketing combines elements of general advertising, sales promotions, and direct marketing to create more effective and more efficient ways of reaching consumers. This centres on developing a continuous relationship with consumers across a family of related products and services.

The relationship marketing process includes three key elements that can be executed more effectively with the use of technology:

1. Identifying and building a database of current and potential consumers which records and cross-references a wide range of demographic, life-style, and purchase information;
2. Delivering differentiated messages to these people through established and new media channels based on the consumer's characteristics and preferences; and
3. Tracking each relationship to monitor the cost of acquiring the consumer and the lifetime value of his/her purchases (Peppers and Rogers, 1997a:63-67).

The one-to-one future will be characterised by three computer capabilities available to businesses: the database, interactivity, and mass customisation.

Technology is closely integrated with relationship management on all levels and will thus be discussed further as an integrated part of the sections to follow.

3.4. The Evolution of Relationship Marketing

Relationship marketing is an old idea but a new focus now at the forefront of services marketing practice and academic research. The impetus for its development has come from the maturing of services marketing with the emphasis on quality, increased recognition of potential benefits for the firm and the customer, and technological advances. Relationship marketing is a

new-old concept. The idea of a business earning the customer's favour and loyalty by satisfying their wants and needs was not unknown to the earliest merchants.

Until recently, marketing's focus was acquiring customers. Formally marketing to existing customers to secure their loyalty was neither a top priority of most businesses nor a research interest of marketing academics. The phrase 'relationship marketing' appeared in the services marketing literature for the first time in a 1983 paper by Berry. Berry defined relationship marketing as "attracting, maintaining and, in multi-service organisations, enhancing customer relationships" (Berry, 1995:25). He stressed that the attraction of new customers should be viewed only as an intermediate step in the marketing process. Solidifying the relationship, transforming indifferent customers into loyal ones, and serving customers as clients also should be considered as marketing.

Using product life-cycle terminology, relationship marketing in both practice and research is beyond the introduction stage and on a growth curve toward becoming a mature concept. The following four influences accounts for the accelerated interest in relationship marketing within the service industry:

(1) The maturing of services marketing.
(2) Increased recognition of potential benefits for the firm.
(3) Increased recognition of potential benefits for customer.
(4) And technological advances.

The maturing of Services Marketing:
Service quality, the core subject that the services marketing field has developed, has stimulated interest in relationship marketing. The object of improving service quality is to engender customer loyalty. A natural extension of the strong interest in service quality is growing interest in relationship marketing. Effective relationship marketing should help a company capitalise on its investment in service improvement.

Benefits to the firm:
Profits climb steeply when a company successfully lowers its customer defection rate. Based on an analysis of more than 100 companies in two dozen industries, it was confirmed that the firms could improve profits from 25 percent to 85 percent by reducing customer defections by just five percent (Berry, 1995:236-245).

Benefits to the customer:
A relationship with the supplier reduces the risk of repurchase and adds a social dimension by making the client feel important. Relationship marketing allows service providers to become more knowledgeable about the customers requirements and needs. Knowledge of the customer combined with social rapport built over a series of service encounters facilitates the tailoring of customised services to the customer's specifications.

Technological advances:
Rapid advances in information technology are decreasing the cost and increasing the practicality of relationship marketing while its potential benefits are becoming better known. Information technology enhances the practical value of relationship marketing by efficient performance of key tasks (Peppers, 1995:76-78). These tasks are:

(1) Tracking the buying patterns and overall relationship of existing customers.
(2) Customising services, promotions, and pricing to customer specific requirements.
(3) Co-ordinating or integrating the delivery of multiple services to the same customer.
(4) Providing two-way communication channels; company to customer and customer to company.
(5) Minimising the probability of service errors and breakdowns.
(6) Augmenting core service offerings with valued extras.
(7) Personalising service encounters as appropriate.

In effect, information technology advances are creating the opportunity for firms to move from segmenting markets by groups to segmenting by individual households (Peppers and Rogers, 1998e:32-34).

Relationship marketing firms need to determine which types of customer defectors they wish to try and save, such as price, product, or service defectors, and create a value-adding strategy that fits their requirements and strengthens the bond with loyalty-prone customers (Berry, 1995:236-245; Rogers, 1998:2,21).

3.5. Customer Relationship Strategy and Management

In this section customer relationship strategy and management will be discussed. The focus will be on populating a literature framework for the understanding of customer relationship management based on strategic elements as well as the different levels of relationship marketing.

Six strategy elements for practising relationship marketing are:

(1) Developing a core service around which to build a customer relationship.
(2) Customising the relationship to the individual customer – segmentation, personalization and customisation.
(3) Augmenting the core service with extra benefits–value added services.
(4) Pricing services to encourage customer loyalty.
(5) Marketing to employees so that the in turn will perform well for customers (Berry, 1995:25).

(6) The building of trust between the customer and the organisation.

Relationship marketing can be practised on multiple levels, depending on the type of bonds used to foster customer loyalty. The higher the level, at which relationship marketing is practised, the greater its potential for sustainable competitive advantage.

Level one relationship marketing relies primarily on pricing incentives to secure customer's loyalty. Higher interest rates for longer duration bank accounts, a free video rental after 10 paid rentals, and frequent flyer points illustrate level one relationship marketing. Unfortunately the potential for sustainable competitive advantage from this approach is low because price is the most easily imitated element of the marketing mix. Customers most interested in pricing incentives are particularly vulnerable to competitor promotions. Marketers seeking to establish the strongest possible relationships typically must be more than a price competitor.

Level two relationship marketing relies primarily on social bonds, although aggressive pricing may be a vital element of the marketing mix. Level two relationship marketers attempt to capitalise on the reality that many service encounters also are social encounters. Social bonding involves personalization and customisation of the relationship, for example, communicating with customers regularly through multiple means, referring to customers by name during transactions, providing continuity of service through the same representative, and augmenting the core service with education or entertainment activities such as seminars or parties. Although social bonding normally cannot overcome a non-competitive core product, it can drive customer loyalty when competitive differences are not strong. (Crosby and Stephens, 1987:404-411).
A social relationship may also prompt customers to be more tolerant of a service failure or to give a company an opportunity to respond to competitor entries.

Level three relationship marketing relies primarily on structural solutions to important customer problems. When relationship marketers can offer target customers value-added benefits that are difficult or expensive for customers to provide and that are not readily available elsewhere, they create a strong foundation for maintaining and enhancing relationships. If the marketer is also using financial and social bonds, the foundation is even more difficult for competitors to penetrate. At level three, the solution to the customer's problem is designed into the service-delivery system rather than depending upon the relationship-building skills of the individual service providers. The problem solution is 'structural' and thus binds the customer to the company, instead of an individual service provider who may leave the firm (Berry, 1995:236-245).

"Relationship marketing has to be seen as a management philosophy starting with customer orientation, continuing with creating satisfied customers and,

finally, activities to maintain profitable long-term relationships" (Holmlund and Kock, 1996:287-304).

Each of the strategy elements mentioned will now be discussed below in more detail, with reference to the levels of relationship marketing where applicable.

3.5.1. Developing a core service around which to build a customer relationship

As mentioned in Chapter one, it is important to distinguish the core service from the augmented product. The advantage of developing a core service is that a focus will exist within the organisation that will drive realistic promises to a customer.

Defining a core service furthermore leads to a better understanding of the scope of work done by the organisation. A realisation of scope and focus can assist in building an understanding within the company around what service can be out-sourced to partners or competitors.

3.5.2. Customising the relationship to the individual customer – segmentation, personalization and customisation

Segmentation:
The term 'market segmentation' was introduced into the marketing literature in 1956 by Wendell R. Smith, who used the phrase to label a strategy. However market segmentation is not really a strategy; it is an analytical act that precedes the development of strategy (Kotler, 1992:50-52).

Through market segmentation it is possible to determine different clusters of relationship and satisfaction. These segmentation schemes can be useful in customer management since it allows for a more personalised service. As customers become more and more demanding it is important to handle them with different objectives.

The key to success is designing and packaging products to meet the needs of members of particular customer segments (Hefter, 1987:15-20). Dull (1998) states that successful companies develop a strong market/segment focus, focus on fewer segments, building customer understanding, capability and dominance in those segments.

Carpenter (1997/1998) cited the following implications for relationship marketing: "...consequences of managing different types of relationships require that banks pay more attention to customer segmentation and targeting, and consider mechanisms for negotiating internally with both

front-line and back-office staff and externally with trade associations and government agencies on behalf of the different groups of customers."

A micro-marketing program based on a needs-based segmentation allows profiling of the larger target population in a cost-efficient way. Once the segmentation analysis has defined the target segments, an abbreviated battery of discriminating attributes can be used to classify the target population into the segments. This method offers flexibility in the collecting information from the larger target population. Only 12 to 15 questions are necessary to profile the 'client', and these questions can be administered in a number of ways, including mail and fax. Once the 'client' is assigned to a segment, the promotion can be customised for that individual. Database management incorporates the profiling of the target population and aids in the implementation of the marketing campaign (Winokur, 1994:62-65).
Today, customers are differentiated by rate tariffs, usually grouped into industrial, commercial and residential classes. In the future, service companies will need to differentiate customers by both need and value. Need really defines a company's relationship with each customer: What does each customer want, how does each want it, what is the best way to communicate with each of them?

Value is what customers are worth to the Services Company. The one-to-one enterprise will use lifetime value to emphasise the importance of long-term relationships with existing customers since it's much more expensive to find new customers than it is to maintain and grow current ones (Peppers and Rogers, 1998d:27-30, 82-84).

Technology and segmentation:
The levels of customer differentiation and interaction required by one-to-one marketing cannot be supported by the typical service provider customer database for several reasons:

(1) Not enough of the right information can be added to existing records.
(2) Most of the data cannot be retrieved at every point of interaction with that customer.
(3) Most database architectures are still ill suited for building and maintaining longitudinal relationships–ones that slowly but continually gather and use customer information.

Segmentation has now progressed to the era of mass customisation, but even segmented markets are too broad. Today's computer technologies and automation capabilities allow companies to produce affordable, individualised versions of products (Kotler, 1992:50-52).

Personalization:
"A good way of retaining customers seems to be recognising that they exist, communicating with them, and responding to the needs they express through this dialogue" (Mitchell, 1998:90).

Personalization is an example of a level two relationship.

Relationship marketing is designed to provide meaningful 'value' at each and every interaction with the customer. This value status is achieved by providing participants meaningful and timely information that relates just to them. That means tailored or personalised communications and a system that 'learns' about the participants over time.

"Personalisation is at the core of recognition-acknowledging customers by name and understanding their individual needs, wants and concerns" (Johnson, 1998:36-38).

Within the umbrella of relationship marketing, one can choose segmentation, or employ personalization. Segmentation is information distributed to narrow, well-defined bands of target customers. Personalization is information distributed and designed to be one-on-one (Levins, 1998:44-52; Tauhert, 1997:43-48).

The company has to communicate with each customer in a way that recognises their specific needs and characteristics and persuade them to respond. A customer needs to be 'recognised' no matter how, when or where he 'touches' the company, whether it's a phone call to sales, a letter querying an invoice, a faxed complaint to customer services, or a web-site visit.

Technology and Personalization:
Powerful software has been developed to enable organisations to cost effectively and efficiently tailor each and every communication piece, in effect creating a 'segment of one' for thousands, or even millions of customers.

This combination of experience and more powerful software has pushed the definition of 'cutting edge' from segmentation to personalization. Each message is tailored to meet the needs of the individual, and materials are more relevant and specific to their needs (Clemm, 1993:53).

Trust is built in this way, and by establishing a feedback loop in the system, customers will continue to share information, enabling each subsequent communication to better meet the needs of the individual (Levins, 1998:44-52).

Companies must have enterprise-wide customer information systems, which gather all relevant information, including a history of all interactions with each customer. Such data should be instantly available to any member of

staff who needs it. Stephen Kelly, a vice-president of the software firm Chordiant, which sells systems for this purpose is of the opinion that the problem is not really the systems, but the culture. Businesses are usually built around functional departments or processes. The key is how do you build the organisation around the customer. After personalization, the product or service must be customised to reflect the specific desires of the customer. After all, it is pointless taking the previous step unless the customer actually sees some benefit from it (Mitchell, 1998:90).

Businesses that truly believe in treating different customers differently, the Web are a nearly perfect vehicle. Implementing any one-to-one program requires taking these four steps:

(1) Identifying customers at every point of contact.
(2) Differentiating customers based on their value to your enterprise, and on their needs from it.
(3) Interacting with each of your customers more cost-efficiently (Donath, 1998:5-6).
(4) Customising some aspect of your product based on each customer's needs and value, at least for the most valuable customers (Peppers and Rogers, 1998f:22-29; Grossman, 1998:13).

In utilising the Web, marketers have an unprecedented opportunity to initiate on-going relationships with consumers, and engage in two-way, interactive dialogues to learn more about each individual and how to serve them better.

Each time a person interacts with a web-site, one can ask additional questions that refine the information and personalise the dialogue. Predictive models can be build and are proving extremely helpful in estimating the success of future relationship marketing campaigns (Levins, 1998:44-52).

Customisation:
The objective of relationship or one-to-one marketing is to give an enterprise the capacity to treat its customers as individuals and thereby develop a continuous relationship with them. This approach uses individually addressable and interactive media to permit dialogue with consumers, offering mass customised goods and services, in many cases delivered directly to the home. Customisation is an example of a level two relationship.

The one-to-one marketer must also plan how to make the company's product and services more useful to individual customers. A fundamental change is beginning to occur in large and small marketing companies around the world as they assess the advantages of switching from mass marketing to relationship marketing and from product management to customer management.

The tool for meeting each customer's needs is mass customisation, creating and packaging complex bundles of products and services that can be

organised and delivered in thousands of different combinations quickly and cost effectively.

With mass customisation, companies create standardised modules that can be produced quickly and cost-effectively in quantity. When a firm finds a customer and assesses its needs, it assembles the modules into a custom configuration. To the customer, this product/service bundle has the look and feel of a customised package. In fact, the package is made of standardised modules quickly assembled into a targeted bundle.

"A one to one enterprise is an organisation that treats different customers differently, remembering each individually, interacting with them to learn their individual needs and then customising products to these specifications." (Peppers and Rogers, 1997b:4-7).

3.5.3. Augmenting the core service with extra benefits

A strong overlap exists between the body of literature of services and relationship marketing when value added services are discussed. As mentioned in Chapter 2, value added services can be classified as an approach to service differentiation. In this section the relationship building component of value added services are going to be discussed

In order to remain competitive organisations must continually amplify or enhance their value-added package (Kotler, 1992:50-52). Enhancements may include new products, special communications, cross-selling offers, newsletters and member events. Value added services are an example of a level three relationship.

The 'Affinity' type loyalty program encapsulates value-added services. The word 'affinity' implies a strong relationship with mutual interests. The affinity program seeks to increase the lifetime value of customers by building strong relationships with them, without the use of rewards. Value is added to customer's relationships through information-intensive communications, value-added benefits and recognition (Johnson, 1998:36-38).

In addition to the core products (Internet connectivity), a bundle can contain a wide range of customisable modules such as more sophisticated ways of purchasing connectivity, time-of-day rates, seasonal rates, demand-based rates, and wireless connectivity.

Services that are logical extensions of core products can take the form of services such as secure e-mail, WebPages and search-engines.

The philosophy behind value added services are to sell what the customer wants, not what the service provider already has. A reliable Internet experience is just a ticket to enter the competitive arena. Over time,

customers will want their ISP to make their lives simpler and more convenient and to bring to them new ideas and approaches that match their own beliefs and interests. It's not about what the average customer wants, or what the majority of customers want, this is what each customer wants.

To create a true one to one relationship, an enterprise must base its actions toward an individual customer not on the products or services it already produces, but on the needs of the particular customer. Sometimes meeting those needs makes it necessary to go outside the organisation for a component, product or service that the company do not supply itself (Peppers and Rogers, 1997b:4-7; Peppers and Rogers, 1997a:63-67).

The focus of the one-to-one enterprise is not to find more customers for its products, but to find more products for its customers (Rogers, 1998). To sustain the relationship, marketers should monitor customer needs and satisfaction and respond to life cycle changes (Brierley, 1994:22-25).

3.5.4. Pricing services to encourage customer loyalty

Loyalty programmes with the exclusion of the affinity program mentioned above are a good example of pricing for loyalty or 'bribing' the customer to stay loyal. Pricing is a level one relationship builder.

Different loyalty programs exist:

(1) The rewards program, which entails rewarding a customer's purchase behaviour with merchandise unrelated to the brand.
(2) The rebates program where the more the customer purchase, the better price will be extended back to the customer.
(3) The appreciation program entails rewards based on the brand rather than unrelated offerings. The choice between a reward and appreciation program is in the fact that a rewards program can also be used as an acquisition tool.
(4) Partnership program, these programmes actively seek new customers with a specific interest in a partner's product.

A customer retention program, sometimes confused with a loyalty program, consists of three main items:

(1) A focus on satisfying current customers.
(2) A means of measuring why customers leave.
(3) A planned effort to prevent customers from leaving once they express a desire to do so.

How satisfied was the customer? What is the customer's reason for leaving?

Typical reasons would include poor service, pricing, change of address, the customer no longer has need for the service or received a better offer from a competitor (The Business Research Lab, 1997).

3.5.5. Marketing to employees so that they, in turn, will perform well for customers

Transform service company employees into Customer Relations Specialists. One of the critical characteristics of a one-to-one organisation is that everyone in the company is focused on serving the customer. With a differentiated customer base, interactive communications with customers and mass-customised products, virtually all components of the organisation must focus, directly or indirectly, on the consumer (Berry, 1995:25).

Mention needs to be made of the importance of employee retention as an antecedent of customer retention. High employee turnover negatively affects service quality and customer retention, thus hurting profitability and further reducing resources available to invest in employee's success (Berry, 1995:91-98; Payne, 1994:29-31).

3.5.6 Building trust

For a strong relationship to exist, it must be mutual. The good intentions of partners in a relationship cannot be in doubt. Communication must be open, honest, and frequent. Similar values must prevail. Partners must be willing to give, not just get. It is critical to the formation of service-based relationships because of the intangibility of services.

Most services are difficult to evaluate prior to purchasing and experiencing them, and some services remain difficult to evaluate even after they have been performed. Customers who develop trust in service suppliers based on their experiences with them have good reasons to remain in these relationships: they reduce uncertainty and vulnerability (Bitner, 1995:246-251).

How can relationship marketers demonstrate their trustworthiness?

Opening lines of communication:
Forthright, frequent, two-way communications clearly are important. Maritz Marketing Research surveyed consumers about being contacted by a company and found that 80 percent of the sample felt it was important for a company to keep in touch with its customers. Eighty seven percent indicated they would buy from a company that had a reputation for keeping in touch. Communication leads to trust and trust to relationship commitment (Melchinger, 1991:100-110).

Guaranteeing the service:
Service guarantees are another means to build trust. Dissatisfied customers can invoke the guarantee and receive compensation for the burden they have endured. When executed well, service guarantees can symbolise a company's commitment to fair play with customers and facilitate competitive differentiation. Guarantees also force the organisation to improve service to avoid the cost and embarrassment of frequently having to pay out.

A service company should never implement a service guarantee without a thorough analysis of its purpose and risks. Guaranteeing a poor service is always a mistake. Firms delivering poor service first should significantly improve their service quality. Then they can consider a guarantee that will help facilitate further improvement (Harris, 1993:14-17).

A higher standard of conduct:
Companies seeking to build genuine relationships with customers must be willing to operate with a higher standard of conduct than just legality.

Corporate practices that rob customers of self-esteem or justice may be legal, but they destroy trust and consequently the potential for relationship building. Relationship marketers must be prepared to subject every policy and strategy to a fairness test. They must be willing to level the playing field. They must be willing to ask not only if it is it legal, but also if it is it right (Berry, 1995:236-245).

3.6. Summary of Chapter 3

This Chapter started out by defining Relationship Marketing; it's importance and evolution. Different strategic initiatives that are practically possible to implement are then discussed. It is clear from the content reviewed in this chapter, and when looking at the complexities and opportunities for innovation, that a focussed approach need to be taken to the implementation of Relationship Marketing strategy.

The following chapter will now link the constructs reviewed in the second chapter with the relationship concepts covered in this chapter. An Integrated model to service and relationship management will thus be created.

Chapter 4
Building a model to capture the dynamic concept of Relationship Quality

Literature Study	**Internet Services** **The Marketing of Services** **Relationship Marketing** **Interrelationships between constructs**
Methodology	Survey and Analysis
Qualitative Findings	Visualisation of Internet Service provision Service breakpoints (Fail Points)
Quantitative Findings	SERVQUAL Interrelationships between constructs
Recommendations	Defining a portfolio of projects
	Academic recommendations

The framework proposed for investigation in Chapter 1 incorporate the basic sequence: service quality leads to customer satisfaction, which leads to relationship strength, which leads to relationship longevity, which leads to customer relationship profitability. In this chapter each of these links between the constructs discussed in previous chapters will be discussed in more detail. Some of the interesting dynamics discussed in literature will also be highlighted in the section to combat a simplistic view of this framework.

The chapter will thus cover the following:

(1) The first link deals with the relation between service quality and customer satisfaction.
(2) The second link deals with the relation between customer satisfaction and relationship strength.
(3) The third link deals with the relation between relationship strength and relationship longevity.
(4) The final link deals with how relationship longevity is connected to customer relationship profitability (Rust *et al.*, 1993:1-23).

This model firstly adds the dynamic perspective of service quality, which has been called for by service quality and customer satisfaction researchers for some time now. Secondly, it ties service management and its notion of perceived service quality to relationship marketing. This is an important step, because as successful relationship marketing to a large extent depends on the capability of the firms of adding value, through various types of services to the core solutions offered to customers and clients, a relationship

marketing strategy cannot be implemented without a thorough understanding of service management. Without an understanding of how to manage the quality of services in customer relationships on a long-term dynamic basis, the company will not be able to make full use of the competitive advantage opportunities offered by a relationship marketing strategy (Storbacka *et al.*, 1994:21-38; Ennew and Binks, 1996:219-230).

4.1. Link 1: The relation between service quality and customer satisfaction

The following theoretical conclusions can be found regarding the relation between satisfaction and quality:

Firstly, satisfaction is understood as an antecedent of service quality. According to this interpretation, quality is equated with the customer's appraisal of a concrete product or service experience. Consequently, it does not include expectational aspects, whereas satisfaction is based on the disconfirmation of expectations associated with the service or product experience. However, this interpretation involves a number of problems, because it ignores the higher stability of the customer's quality perceptions and the different affective–cognitive structure of both constructs. Moreover, the problematic assumption of a quasi-objective understanding of the quality construct implicitly underlying this interpretation of the relation between satisfaction and quality raises questions. The latter is clearly illustrated when Strandvik and Liljander, as proponents of this interpretation, explain the state of being dissatisfied despite high quality by arguing that the product or service 'does not fit the customer's preferences'.

Secondly, both constructs are treated as one and the same. According to this approach, no significant theoretical difference between satisfaction and quality exists. As with the first interpretation, the aforementioned divergences concerning the higher stability of quality perception and the emotional dominance of satisfaction are ignored by this approach.

The third is found where customer satisfaction is modelled as an antecedent of quality. Following this interpretation, the product and/or service-related quality perception is seen as the higher-order and more stable variable, which is built mainly on previous experience of (dis)satisfaction related to discrete transactional episodes. Thus, satisfaction is regarded as a short-term emotional state that results from an intrapersonal comparison of the customer's expectations with the evaluation of a single product or service encounter. This emotional state of satisfaction leads to an overall, global attitude concerning service quality, which is implicitly based on some kind of internal expectation standard. Because quality is a dynamic construct, additional consumption experiences influence and modify the existing quality perception. In other words, multiple satisfaction evaluations contribute to an overall quality evaluation.

Underlying dynamics:
There has been some confusion regarding the difference between service quality and customer satisfaction.

Suggestions have been made that perceived service quality could be seen as an outsider perspective, a cognitive judgement of service. It need not even be experienced, it can be based on knowledge about a service provider through word of mouth or advertising. It is, however, usually also based on experiences with the service (Storbacka *et al.*, 1994:21-38).

According to this suggestion, satisfaction refer to an insider perspective, the customer's own experiences of a service where the outcome has been evaluated in terms of what value was received, in other words what the customer had to give to get something. A customer could, therefore, respond on a questionnaire that a particular bank is of high quality even if this did not mean that this customer was satisfied using the bank.

Service quality can be judged low but the customer is satisfied. This might be the case when the service fits the customer's budget or is priced according to low quality. Low satisfaction but high perceived service quality is also a possible outcome. The customer judges the service to be of high quality but is not satisfied because what was given (price) is not perceived to correspond to the received quality. Satisfaction is thus related to perceived value (Storbacka *et al.*, 1994:21-38).

A conceptual model has been presented by Henning-thurau and Klee (1997) that postulates that the relationship between satisfaction and customer retention is moderated by the relationship quality construct and must be interpreted as non-linear.

Furthermore, the conducted analysis suggests that the traditional understanding of the customer's product- or service-related perception must be broadened for three aspects:

(1) A competition-related perspective must be added.
(2) The customer's level of involvement must be considered.
(3) The quality construct has to be differentiated on the basis of changes of the customer's internal expectation standard (Henning-thurau and Klee, 1997:737-764).

4.2. Link 2: Customer satisfaction association to relationship strength/relationship quality

One way to achieve strong relationships and, thus, long relationships is to ensure that customers are satisfied. The proposition is that dissatisfied customers will defect; the relationship ends. Customers seem to have a zone

of tolerance, which can be defined as the difference between adequate and a desired level of service. Customers are "prepared to absorb some unfavourable evaluations before expressing them in terms of net dissatisfaction". In retail banking this would suggest that customers may be dissatisfied with a service episode and still be satisfied with the relationship. (Storbacka *et al.*, 1994:21-38).

Underlying dynamics:
There are aspects of relationship strength other than customer satisfaction. These include the existence of bonds between the customer and the provider. These bonds function as switching barriers beside customer satisfaction. Another dimension relates to the customer's (and the provider's) commitment to the relationship. Commitment might be based on customer's intentions and plans for the future.

Ten different bond types can be identified in the consumer market: legal, economic, technological, geographical, time, knowledge, and social, cultural, ideological and psychological. The first five bonds constitute effective exit barriers for the consumer. They can be seen as contextual factors that can not easily be influenced by the customer but can be observed and managed by the service firm. They are more likely to be perceived in a negative sense than the other five bonds. These bonds can prevent the customer from switching even when the service given is of low quality.

Dissatisfied customers may remain loyal due to high switching costs. Establishing a new relationship represents some sort of investment of effort, time and money which constitutes a significant barrier to the customer's taking action when dissatisfied with a distinct interaction during a relationship.

The other five bonds; knowledge, social, cultural, ideological and psychological bonds, represent perceptual factors, which are difficult to measure and manage by the firm. The consequence of bonds is that the customer might accept lower levels of service quality, compared with other service companies, without breaking the relationship.

An additionally interesting perspective on how relationship strength is achieved is the commitment of customers (Storbacka *et al.*, 1994:21-38).

Commitment and loyalty are related concepts, although they relate from different research traditions. Loyalty is usually defined as observed purchase behaviour. This is consistent with the transactional perspective used within traditional consumer marketing. Commitment has been used within the interaction approach of industrial marketing. It refers to adaptation processes, which are the result of the parties' intentions to act and positive attitudes towards each other. Loyalty is defined as only repeat purchase behaviour within a relationship. Commitment is defined as the parties' intentions to act and their attitudes towards interacting with each other.

Loyalty can occur with three different types of commitment, positive, negative or no commitment. A negatively committed customer shows a negative attitude but might still buy repeatedly because of bonds. This also means that customer loyalty is not always based on positive attitude, and long-term relationships do not necessarily require positive commitment from the customers. This distinction is important as it challenges the idea that customer satisfaction (the attitude) leads to long-lasting relationships (the behaviour).

Customer satisfaction is only one dimension in increasing relationship strength. Strong relationships can be dependent of perceived or contextual bonds that function as exit barriers. It is, however, important to note that the use of contextual barriers can generate latent dissatisfaction, which emerges as the importance of the contextual bonds (for instance legal bonds) decreases. Some customers may be very committed to the relationship and for these customers the perceived satisfaction with the relationship is very important. Others may find the relationship basically unimportant and for these customers the satisfaction component is not as important.

Rust and Zahorik (1993) prefer to have a repurchase intention measure rather than retention. The categories on the repurchase intention question may vary from company to company, but it may be useful to have more than a yes-no question for repurchase intention. This is because in a very good company the number of 'no's' are small, leading to a loss of explanatory power, and in turn resulting in a very large sample size requirement.

It must also be recognised that the repurchase category may not reflect the true probability of repurchase. These categories must be followed up on samples of respondents, to determine their actual repurchase probabilities. Once this calibration has been done, the repurchase intention may be used directly for some time, without further calibration (Rust and Zahorik, 1993:193-215).

4.3. Link 3: Relationship strength association to relationship longevity

The benefits of quality come in two forms. One effect is the improved ability of the firm to attract new customers, due to word of mouth, as well as the firm's ability to advertise the quality of its offerings. This effect is in many ways analogous to product repositioning, and is part of 'offensive marketing' those actions which seek to attract new customers. Conjoint analysis methods can be used to determine the 'pull' that upgraded quality might have for customers of other brands.

Another result of improved quality is that current customers are more satisfied with the products they buy, and they return. Retaining current

customers through higher levels of satisfaction is called 'defensive marketing'.

In the context of relationship marketing, customer satisfaction is often viewed as a central determinant of customer retention. However, the few empirical investigations in this area indicate that a direct relationship between these constructs is weak or even non-existent.

In numerous publications, satisfaction has been treated as the necessary premise for the retention of customers, and therefore has moved to the forefront of relationship marketing approaches. Kotler sums this up when he states: "The key to customer retention is customer satisfaction" (Kotler in Henning-thurau and Klee, 1997:737-764). Consequently, customer satisfaction has developed extensively as a basic construct for monitoring and controlling activities in the relationship-marketing concept.

The link between satisfaction and long-term retention of customers is typically formulated by marketing practitioners and scholars in a rather categorical way, and is therefore treated as the starting point, rather than the core question of the analysis. Consequently, only a few researchers have investigated the nature and extent of the relation between satisfaction and retention itself.

The small number of existing studies in this area can be classified into the following groups:

The first group of researchers use monetary data, such as revenues or profit, as dependent variables. Thus, the individual level of analysis is substituted by an aggregated company-wide level. The validity of such a procedure for the investigation of the satisfaction – retention relation seems to be limited for two reasons. First, the aggregation of data renders any analysis on the individual customer level impossible. Second, profit and revenues are determined by a multitude of variables, which in addition are highly correlated.

A second group of studies on an individual level utilises repurchase intentions of customers to investigate the link between satisfaction and retention. This approach is also accompanied by two primary limitations. Because satisfaction values and intention measures are normally obtained through the same questionnaire the data are inherently correlated. This may lead to an overestimation of the strength of the relationship. Secondly, previous research in the area of customer loyalty shows that the predictive validity of intention measures varies depending on the product, the measurement scale, the time frame, and the nature of the respondents.

Finally, a few studies have used real purchasing data on an individual level to examine the satisfaction–retention relationship. This is the main group of interest here, because it avoids the problems mentioned above. These

studies consistently show only a weak (or in some cases non-existent) link between both variables (Henning-thurau and Klee, 1997:737-764).

Customer retention does clearly not contain any attitudinal aspects. In customer retention, the marketer is seen as taking the active role in the marketer–customer dyad, whereas the behavioristic repeat-purchase concept pays no attention to the factors underlying the displayed behaviour. Therefore, customer retention aims at repeat purchase behaviour that is triggered by the marketer's activities, its study focuses on the managerial aspects.
"When investigating the determinants of customer retention, the scientific knowledge gained in the fields of brand-loyalty and especially repeat-purchase behaviour can only be applied when the knowledge does not refer exclusively to repeated patronage of a marketer/supplier that is not related to marketing activities and/or attitudinal aspects" (Henning-thurau and Klee, 1997:737-764).

The shift towards keeping existing customers is associated with three rules of thumb from service management:

(1) It costs five times more to attract a new customer than to keep an existing one.
(2) It takes 12 positive service experiences to overcome a negative one.
(3) 25 to 50 percent of the operating expense of a company can be attributed to poor service quality–to the cost of not doing it right the first time (Holmlund and Kock, 1996:287-304).

Relationship marketing differs from the traditional marketing mix model as the main emphasis is on maintaining long-term relationships with customers. Furthermore, it is more advantageous and profitable to develop new products for present customers instead of trying to find new customers for present products.

Companies believe that they are marketing-oriented when seeking customer opinion of current products, whereas the customer believes that a firm is market-oriented when their opinions guide the design of products (Holmlund and Kock, 1996:287-304).

Bolton (1998) suggests that customer satisfaction ratings elicited prior to any decision to cancel or stay loyal to the provider are positively related to the duration of the relationship. The strength of the relationship between duration times and satisfaction levels depends on the length of customers' prior experience with the organisation. Customers who have many months' experience with the organisation weigh prior cumulative satisfaction more heavily and new information (relatively) less heavily. Organisations should focus on customers in the early stages of the relationship, if customer's experiences are not satisfactory, the relationship is likely to be very short.

In a study of 276 immunochemistry analysers and test kit customers it was found that the building of service partnerships with customers lead to firms having customers that were more satisfied and loyal. Furthermore, customers perceived a greater level of quality associated with the products of firms who engaged in relationship building activities. In order to build such long-term relationships, companies need to embrace the concept of customer satisfaction. Buying into, or embracing customer satisfaction concepts requires that a firm continuously measure and collect information relating to their customer's level of satisfaction (Conrad, Brown and Harmon, 1997:663-674).

Clarity Connect Inc., of Ithaca N.Y., tries to avoid the cancellation call altogether. Each month the ISP scans call logs and disconnect reports for a drop in individual customer activity or a high amount of disconnects, said Chuck Bartosch, Clarity's president. "Then, before we send a bill we call them and ask if everything is okay. Sometimes they've simply been on vacation, sometimes it's a problem we help them resolve. Either way, they appreciate the attention" (Hulme, 1997).

From literature, one can deduce certain underlying dynamics:

Longevity can originate from relationship extrinsic factors such as the market structure, in which the relationship exist, and the possible geographical limitations (the customer moves to a geographical location in which the provider does not have a presence). Longevity can also originate in relationship intrinsic factors such as the relationship strength and the handling critical episodes during the relationship.

The customer may be loyal to the relationship because of a lack of perceived alternatives, such as thinking that all banks are the same, regardless of relationship strength.

When analysing relationship intrinsic factors we also have to consider how critical episodes are handled. It is important to note that every episode does not carry the same importance or weight in the customer's evaluation of the relationship. Some of the episodes can be labelled routine episodes. A critical episode can be defined as an episode that is of great importance for the relationship. The continuation of the relationship is dependent (both in a negative and positive way) on critical episodes. A successful critical episode can strengthen the relationship so that it may withstand several unsatisfactory routine episodes. On the other hand an unsuccessful critical episode may end the relationship abruptly, although it may have been preceded by years of satisfactory routine episodes even though the relationship has been judged to be strong.

The definition of a critical episode is customer and situation specific. A routine episode can become a critical episode if, according to the customer, the adequate level of performance is not met. The episode then becomes a

'critical incident' which makes the customer very involved and may end the relationship.

It is obvious, based on the above discussion, that relationship longevity is not always a function of relationship strength. There are many random factors that influence the development of a relationship. Most of the relationship extrinsic factors are such that the provider cannot influence them. It is important to note that relationship longevity may be a result of the fact that the episodes in the relationships have all been routine episodes. The customer may feel that the relationship is not very important, or at least not important enough to motivate the investment of time required to end the relationship. As soon as there is a poorly managed critical episode in the relationship, the customer may become involved enough to take the time to choose another provider.

The importance of critical episodes is evident. Even strong relationships may end because of poorly managed critical episodes. This way of arguing can be related to ideas about the importance of 'service recoveries' (Storbacka *et al.*, 1994:21-38).

4.4. Link 4: Relationship longevity link to customer relationship profitability

According to the US strategy consulting firm Bain and Company. Its recent research showed that a five per cent increase in customer retention leads to a considerable rise in net present value profits: this increase can be as much as 125 percent for a credit card company and 50 percent for an insurance broker. According to Payne (1994), there are five reasons why retaining customers is so profitable:

(1) Sales and marketing and set-up costs are amortised over a longer customer lifetime.
(2) Customer expenditure increases over time.
(3) Repeat customers often cost less to service.
(4) Satisfied customers provide referrals.
(5) Satisfied customers may be prepared to pay a price premium.

The best argument for trying to anticipate the future direction of customer values is that satisfying and retaining loyal customers over several years can dramatically affect a company's profit stream. According to Bradley Gale's study of 2 746 businesses (taken from the PIMS data base of The Strategic Planning Institute), gaining a mere 3% in customer satisfaction can increase annual return on investment (ROI) by at least one percent. In another study of nine industries, it was found that retaining just five percent more customers can boost long-term profits from 25% to 85% depending on the industry (Freid and Freid, 1995:40-41).

The realisation that tiny reductions in the rate of defection to rival brands can have disproportionate effects on profitability has done wonders to concentrate marketers minds, leading them down the now familiar road of customer loyalty, the quest for deeper, longer relationships with customers, and obsession with customer satisfaction (Mitchell, 1998:32-33).

The following underlying dynamics can be identified:

(1) In a study of retail banking, customer satisfaction was higher among the most unprofitable customers in the customer base. Customer satisfaction seemed to be a function of the relationship volume, such as the amount of deposits and lending that the customer had in the bank under consideration. We can speculate whether high volume drives customer satisfaction rather than the opposite.

(2) The proposed value of increased relationship longevity is based on the idea that keeping existing customers is cheaper than acquiring new ones and that the positive cash-flow of customer increases the value of long-lasting customer relationships. Seeking to retain a hopelessly unprofitable customer in industries with continuous customer relationships cannot make business sense. It is important to note that if it is impossible to enhance an unprofitable customer relationship in order to make it profitable, there is no logic to strive towards relationship longevity. It is not self-evident that a provider should aim at long-term relationships with all customers (Payne, 1994:29-31).

(3) There are ways to increase relationship revenue; to raise the prices or to increase the patronage concentration of the customer under consideration. A provider can influence its customers to concentrate their patronage by increasing relationship strength, but certainly there are others to consider, relationship pricing being one of the more important ones. Customers that generate the same relationship revenue may have different episode configurations. Thus the relationship costs and profitability of the relationships will be different.

The ideal situation is that of a customer relationship with high customer relationship profitability that would have a high level of relationship strength. If these customer relationships have a low level of relationship strength, the organisation under consideration is obviously very vulnerable and exposed to competitive action. If customers with negative profitability have a high level of relationship strength, the strength can be used to influence the customer's behaviour. As the relationship is strong it may also be possible to use more persuasive means of influence without endangering relationship longevity (Storbacka *et al.*, 1994:21-38).

Customer retention has a major impact on market share, but it is not the only factor. Market growth rate, market 'churn' (customers entering or leaving the market, even given a stable market size), the competitor's

retention rates, and the effectiveness of the companies offensive marketing efforts such as advertising, price and convenience. These factors all play a role in determining market share. Given estimates of these other factors, which are generally available from internal company data, competitive analysis, or customer surveys, the effect of customer retention rate can be calculated on market share (Rust and Zahorik, 1993:193-215).

4.5. Summary of Chapter 4

The body of literature referred to supports the model where service quality leads to customer satisfaction and customer satisfaction to relationship quality, which in turn leads to customer longevity and thus revenue. In the following chapter, the methodology proposed for empirically confirming this model within the Internet Industry will be discussed.

Chapter 5
Methodology

Literature Study	**Internet Services** **The Marketing of Services** **Relationship Marketing** **Interrelationships between constructs**
Methodology	**Survey and Analysis**
Qualitative Findings	Visualisation of Internet Service provision Service breakpoints (Fail Points)
Quantitative Findings	SERVQUAL Interrelationships between constructs
Recommendations	Defining a portfolio of projects
	Academic recommendations

In this chapter the following elements will be covered in order to cover the methodology used in fulfilling the objectives stated within the problem statement in Chapter 1:

(1) The Instrument used – the Internet based questionnaire used for the survey is discussed.
(2) The measurement questions used within the questionnaire are stated.
(3) Feedback obtained through executive interviews is briefly cited.
(4) Sample selection for and collection of the survey is described.
(5) A literature overview of multivariate analysis is given.
(6) Different methods within the realm of multivariate analysis is discussed – multiple regression, factor analysis and structural equation modelling.
(7) The scope and methods used for each of the objectives cited in the problem statement stated in Chapter 1 is covered and hypothesis set.
(8) Key terminology is covered to assist in the interpretation of findings in Chapter 6.

5.1. Instrument used

The instrument used in this study was an Internet based questionnaire. The Internet was used as a research vehicle, similar to telephone and other interactive survey methods. The questionnaire was hosted on a web site/ server. This allows fairly complex interactivity, help facilities and skip procedures. Respondents were lured to the site by an e-mail message requesting them to go to the survey site.

The full population of Intekom subscribers has access to the Internet and to an e-mail box. This allowed for the Internet to be used a primary research vehicle.

The advantages of using online research:

(1) High levels of interactivity. It was possible to alert respondents to mistakes that they have made in completing the questionnaire as well as questions skipped.
(2) Control can be more efficient since it is possible to integrate control procedures with the server architecture. The server verified certain user characteristics/identification codes interactively while the respondent logs onto the questionnaire. Respondents could only log onto the questionnaire if they were invited to do so.
(3) The questionnaire was adjusted on the spur of the moment. After a pilot survey of 100 respondents, the questionnaire layout was changed in a matter of minutes.
(4) The session variables of the respondents completion of the questionnaire could be monitored very closely, for instance the time spent on a specific question. Questions that the respondents completed in unrealistically short timeframes such as a section of 27 question in fewer than three minutes were dropped from the analysis.
(5) Data was immediately available, for analysis. Responses could be tracked in and if any problems were picked up during the pilot analysis the main mail-shot instrument could be changed or cancelled (Venter and Prinsloo, 1999).

Disadvantages in using Internet based research instrument for this study:

(1) The respondent pays for the telephone connection (local charges in South Africa).
(2) The time spent to complete the questionnaire is reliant on the quality of the connection to the Internet (Venter and Prinsloo, 1999).

5.2. Measurement questions

In this study, Ratio scales were used. Ratio scales represent the highest form of measurement precision, because they possess the advantages of all lower scales plus an absolute zero point. All mathematical operations are permissible with ratio scale measurements. The bathroom scale or other common weighting machines are examples of these scales, for they have an absolute zero point and can be spoken of in terms of multiples when relating to one point on the scale to another; for example, 100 pounds is twice as heavy as 50 pounds (Hair, Anderson, Tathim and Black, 1995:8).

The questionnaire was first e-mailed to 75 staff members of Intekom in order to get feedback on the design. Changes were effected and another 100

questionnaires were e-mailed to a pilot subscriber sample drawn from the Intekom database. Telephonic interviews were held with 42 of these respondents to get feedback on questionnaire design, ease of use and understanding. The questionnaire was then finalised and approved for distribution by Intekom management.

Methods used in the qualitative phase:

(1) Six management interviews of one hour each.
(2) Two customer support desk focus groups of two hours each.
(3) Five service blueprint workshops with key individuals of one hour each.
(4) One subscriber focus group of three hours.

The outputs from these interviews and focus groups were used in the blueprinting exercise and questionnaire development.

In addition to the blueprinting and questionnaire development the following useful feedback was obtained from Intekom management:

(1) It is important to 'touch' the customer as often as possible, communication is the basis for relationship building.
(2) The history of customer interactions with the ISP must be at the fingertips of client facing personnel.
(3) Employees within the ISP must be treated like adults, they in turn will then treat customers as adults, and this should lead to higher levels of customer satisfaction.
(4) Employees must be empowered to make decisions in order to satisfy the needs of subscribers.
(5) The customer is the best new product developer that an ISP can ask for, they are not bound by system constraints and pre-conceived viability judgements. It is important to welcome and listen to new product ideas coming from customers.
(6) Mass customisation of communication content is an important driver of the service experience.
(7) Communities need to be built around unique content that the ISP owns, for example if the ISP held rights to a propriety business directory service.
(8) Employees need to be incentivised if they overcome fail-points.
(9) Value added services are an important driver of service quality.

Table 5.1. Questions used in the qualitative investigation

Question	Input field
Have you experienced any problems with Intekom's service in the past six months?	Yes/No
If YES, please specify	Open
If you answered YES to the previous question, was the problem resolved	Yes/No

to your satisfaction?	
If NO, please specify	Open

Questions used in the empirical investigation:

Service quality questions:
The SERVQUAL scale was developed for assessing customer perceptions of service quality in service and retailing organisations. It is a quantitative questionnaire which consists of two parts, asking customer's opinions towards a particular service (expected quality) and that towards a particular firm (perceived quality). A set of 22 statements is applied in each part, to allow comparisons between expectation and perception. Each statement is a 10-point scale ranging from 'strongly agree' to 'strongly disagree'. For instance, respondents are asked to give a score to the following statement: 'Courier services should have up to date equipment.' These statements are grouped into five essential dimensions, though it is not explicitly expressed in the questionnaire (LOGIC web-site,1997).

Several single item measures used in previous research to investigate the nomological validity of SERVQUAL were included in the questionnaire. These items were designed to investigate whether subjects would consider the company first if they were seeking additional services, whether subjects would recommend the company to a friend, and whether they had ever reported a problem with it. The argument for these items is that those who perceive higher service quality for a particular service should be more willing to go there first, to recommend it to a friend, and more likely never to have reported a problem with it (Brown, Gilbert and Peter, 1993).

The skeleton may be adapted or supplemented to fit the characteristics or specific research needs of a particular organisation (LOGIC web-site, 1997).

(Attached questionnaire in the appendix for more detail and instructions to the questionnaire)

Table 5.2. Core service quality questions.

Question	Input field
The speed of your Internet connection	Ratio scale
The reliability of the connection (e.g. not dropping the line)	Ratio scale
The availability of a connection (e.g. line availability)	Ratio scale

Table 5.3. Tangibility questions.

Question	Input field
Technologically advanced Infrastructure	Ratio scale
Customer friendliness of the Internet Service Provider	Ratio scale

Visually pleasing materials associated with the products and services (e.g. promotional material, manuals and brochures, aesthetically pleasing marketing material)	Ratio scale

Table 5.4. Reliability questions.

Question	Input field
When promising to do something, the ISP does so (e.g. returning calls, arrival at training sessions, delivery of material, appointments, activation of services)	Ratio scale
When customers have a problem, the ISP shows a sincere interest in solving it (e.g. complaints, technical problems)	Ratio scale
Carrying out all services correctly the first time (configuration, support services, enhancements)	Ratio scale
Providing the service at the promised time (e.g. follow-up of enquiry's, fax back of application responses and account activation information fax)	Ratio scale
Providing error free documentation (e.g. keeping records, Internet explorer setup instructions)	Ratio scale
Keeping customers informed about when services will be performed (e.g. delivery, invoicing, follow-up, maintenance and enhancements)	Ratio scale

Table 5.5. Responsiveness questions.

Question	Input field
Prompt service to customers (e.g. setting up appointments, returning calls, resolving problems)	Ratio scale
Willingness to help customers (e.g. to answer questions, technical assistance, providing information)	Ratio scale
Readiness to respond to customer's requests (e.g. response to complaints, help and assistance.)	Ratio scale

Table 5.6. Assurance questions.

Question	Input field
The attitude and behaviour of employees that instils confidence in customers	Ratio scale
Customers that feel secure in their involvement (e.g. can trust them)	Ratio scale
Ensuring that problems are resolved above expectation(doing it 'very right' the second time)	Ratio scale
Employees that are always courteous with customers (e.g. good telephone manners, handling customers with respect, showing consideration)	Ratio scale
Being a credible Internet Service Provider (e.g. trustworthiness, integrity and honesty, name and reputation)	Ratio scale
Employees that have the knowledge to answer customer's questions (e.g. knowledge and skill of personnel, providing	Ratio scale

general information on day-to-day issues)	

Table 5.7. Empathy questions.

Question	Input field
Always being approachable (e.g. easy access to management, prompt telephone access, ease of contact)	Ratio scale
Treating customers with empathy (e.g. treat customers with dignity, demonstrating understanding with complaints, guarding against confrontation)	Ratio scale
Keeping customers informed and listening to them (e.g. supplying information on technological advancements, attentive to changing customer needs)	Ratio scale
Providing personal attention (e.g. acknowledgement of customer dislikes, support during problems)	Ratio scale
Have customer's best interests at heart (e.g. building long-term relationships)	Ratio scale
Understanding the specific needs of customers (e.g. assessment of customer requirements)	Ratio scale

Table 5.8. Customer satisfaction question.

Question	Input field
Please indicate your overall perception of INTEKOM compared to other ISPs, Content Providers and/or Internet Companies.	Ratio scale

Table 5.9. Internet satisfaction questions.

Question	Input field
Please indicate your overall satisfaction with each product or service that you have used:	
Communicating on the Internet e.g. sending e-mail and or using chat programs	Ratio scale
Surfing the Internet e.g. clicking on links, searching for information	Ratio scale
Transacting on the Internet e.g. buying goods/services through the Internet and/or doing home banking	Ratio scale

Table 5.10. Relationship quality questions.

Question	Input field
How would you rate the overall quality of your relationship with Intekom?	Ratio scale
Taking all things into consideration, if you were in the situation to reconsider your relationship with Intekom, how likely would you be to continue your relationship with them?	Ratio scale
Based on your experience with Intekom, how likely are you to continue using the services that you are currently using?	Ratio scale

Based on your experience with Intekom, how likely would you be to use/buy additional services from Intekom in the future?	Ratio scale
If things stayed the same as it is with Intekom and a friend, colleague or acquaintances asked you to recommend a company for Internet services, how likely would you recommend Intekom?	Ratio scale

Table 5.11. Value-added services questions.

Question	Input field
Please indicate your overall satisfaction with each product or service that you have used.	
E-mail	Ratio scale
5Mb free personal webspace (personal WebPages created)	Ratio scale
Aliases on dial-up account (other names for your e-mail account)	Ratio scale
Starter Kit for browser configuration	Ratio scale
24 Hour Toll-free customer service desk	Ratio scale
Intekom Newsletter	Ratio scale
Newsgroups	Ratio scale
On-line registration	Ratio scale
Intekom Home Page	Ratio scale

Table 5.12. Flow questions.

Question	Input field
I am very skilled in....	
...communicating on Internet e.g. e-mail and/or chat programs	Ratio scale
... surfing the World Wide Web e.g. clicking on links and/or using search engines to find information.	Ratio scale
... doing transactions on the Internet e.g. ordering goods or doing home banking.	Ratio scale
The following is a challenge to me...	
...communicating on Internet e.g. e-mail and/or chat programs	Ratio scale
... surfing the World Wide Web e.g. clicking on links and/or using search engines to find information.	Ratio scale
... doing transactions on the Internet e.g. ordering goods or doing home banking.	Ratio scale

Retention measurement:

Data-mining was done within the Intekom database to establish which subscribers left Intekom between the survey date October 15, 1998 and May 31, 1999.

5.3. Sampling and collection

Two probability samples of 5 000 e-mail addresses each were drawn from the Internet Service Provider database. An e-mail invitation to a web-based questionnaire was mailed out on the first of October 1998 at 10:00. One sample was promised double movie tickets for the first 100 completed questionnaires submitted and mouse-pads for the next 200 respondents. No promise of incentive was made to the other sample. For relationship reasons both samples were in the end awarded with the same incentive structure although not promised.

In this study the Internet Service Provider database information was used to validate respondents as subscribers, make sure they complete only one questionnaire and provide subscriber postal codes to weigh the sample realisation back into the population.

In a pilot sample it was found that a large percentage of the respondents used an alias (secondary e-mail address) and not their main e-mail account to respond to the questionnaire. The impact of this is that e-mail addresses and e-mail aliases must be correlated to establish identity control. Internet service providers are in a unique position to provide this type of correlation. Response control problems are very similar to those experienced with telephone and mail surveys.

The productive time associated with the completion of the questionnaire had a comfortable fit with a 10-day period.

More than half of the Internet research responses were collected within the first 48 hours after launch of the questionnaire.

The response patterns over time were almost identical, with similar drop-off rates occurring for both samples. However, the response volume for the incentive group was nine percent higher than for the non-incentives group. From the 5000 invites, approximately 70% of the incentivised group followed the link to the web page, compared to 42% of the non-incentivised group. Of the Web page visitors, 34% and 37% respectively started with the questionnaire. Of those starting, 78% and 56% respectively proceeded to the middle of the questionnaire, and of these 88% and 84% respectively submitted a questionnaire. Please see table 5.13.

Table 5.13. Response patterns over time.

	Web-page	Start questionnaire	Middle of questionnaire	Submit questionnaire
Incentivised group	70%	34%	78%	88%
Non-incentivised group	42%	37%	56%	84%

In addition, 66% of responses were generated within the first 48 hours after launch of the questionnaire for both samples. Detailed records were kept as to what time was spent on the questionnaire, and when questionnaires were completed. Most questionnaires were submitted after office hours. It is interesting to note that the incentivised sample took less time to complete the questionnaire than the non-incentivised sample. A total of 1372 questionnaires were completed.

5.4. Multivariate Analysis

Multivariate analysis can be seen as the analysis of multiple variables in a single relationship or multiple sets of relationships (Hair *et al.*, 1995:2). Any simultaneous analysis of more than two variables can be loosely considered multivariate analysis.

The use of multiple variables and the reliance on their combination (the variate) in multivariate techniques also focuses attention on a complimentary issue called measurement error. Measurement error is the degree to which the observed values are not representative of the 'true' values.

The researcher's goal of reducing measurement error can follow several paths. In assessing the degree of measurement error present in any measure, the analyst must address both the validity and reliability of the measure.

Validity is the degree to which a measure accurately represents what it is supposed to. Ensuring validity starts with a thorough understanding of what is to be measured and then making the measurement as accurate as possible. Accuracy does not ensure validity.

Reliability is the degree to which the observed variable measures the 'true' value and is 'error free'; it is the opposite of measurement error. If the same measure is asked repeatedly, for example, more reliable measures will show greater consistency than less reliable measures. The researcher should always assess the variables being used and if valid alternative measures are available, choose the variable with the higher reliability.

The researcher may also choose to develop multivariate measurements, also known as summated scales, where several variables are joined to represent a composite variable. The objective is to avoid using only a single variable to represent a concept, and instead use several variables as indicators, all representing differing facets of the concept to obtain a more 'well-rounded' perspective. The use of multiple indicators allows the researcher to more precisely specify the responses desired and does not place total reliance on a single response but instead on the 'average' or 'typical' response to a set of related responses. The guiding premise is that multiple responses more accurately reflect the 'true' response than does a single response.

The impact of measurement error and poor reliability cannot be directly seen, because they are embedded in the observed variables. The researcher must therefore always work to increase reliability and validity, which in turn will result in a 'truer' portrayal of the variables of interest. Poor results are not always due to measurement error, but the presence of measurement error is guaranteed to distort the observed relationships and make multivariate techniques less powerful.

All the multivariate techniques, except for cluster analysis and multidimensional scaling, are based on the statistical inference of a populations values or relationships among variables from a randomly drawn sample of that population. If a census was conducted of the entire population, then statistical inference is unnecessary, because any difference of relationship, however small, is 'true' and does exist. But rarely, if ever, is a census conducted; therefore, the researcher is forced to draw inferences from a sample.

Interpreting statistical inferences requires that the researcher specify the acceptable levels of statistical error. The most common approach is to specify the level of Type I error, also known as alpha. The Type I error is the probability of rejecting the null hypothesis when actually true, or in simple terms, the chance of the test showing statistical significance when it actually is not present, the case of a 'false positive.' By specifying an alpha level, the researcher sets the allowable limits for error by specifying the probability of concluding that significance exists when it really does not.

But in specifying the level of Type I error, the researcher also determines an associated error, termed the Type II error or Beta. Type II errors are the probability of failing to reject the null hypothesis when it is actually false. An even more interesting probability is 1 - Beta, termed the power of the statistical inference test. Power is the probability of correctly rejecting the null hypothesis when it should be rejected. Thus, power is the probability that statistical significance will be indicated if it is present (Table 5.14).

Table 5.14. The relationship of the different error probabilities in the hypothetical setting of testing for the difference in two means.

		Reality	
		Ho: No Difference	Ha: Difference
Statistical Decision	Ho: No Difference	1- alpha	Beta Type II error
	Ha: Difference	Alpha Type I error	1 - Beta Power

Type I and Type II errors are negatively related, and as type I errors becomes more restrictive (moves closer to zero), the type II error increases.

Reducing the type I errors also reduces the power of the statistical test. Thus, the analyst must strike a balance between the level of alpha and the resulting power.

Power is not solely a function of alpha. It is actually determined by three factors:

(1) Effect size: The probability of achieving statistical significance is based not only on statistical considerations but also on the actual magnitude of the effect of interest (for example the correlation between variables) in the population, termed the effect size. To assess the power of any statistical test, the researcher must first understand the effect being examined. Effect sizes are defined in standardised terms for ease of comparison. Mean differences are stated in terms of standard deviations, so that an effect size of .5 indicates that the mean difference is one-half of a standard deviation. For correlations, the effect size is based on the actual correlation between the variables.

(2) Alpha: as alpha becomes more restrictive, power decreases. This means that as the analyst reduces the chance of finding an incorrect significant effect, the probability of correctly finding an effect also decreases. Conventional guidelines suggest alpha levels of .05 and .01. But the analyst must consider the impact of this decision on the power before selecting the alpha level.

(3) Sample size: At any given alpha level, increased sample size always produce greater power to the statistical test. But increased sample sizes can also produce 'too much' power. By increasing sample sizes, smaller and smaller effects will be found to be statistically significant, until at very large sample sizes almost any effect is significant. The researcher must always be aware that sample size can impact the statistical test by either making it insensitive (at small sample sizes) or overly sensitive (at very large sample sizes).

Acceptable levels of power should be achieved if studies are designed to achieve alpha levels of at least .05 with power levels of 80% (Hair *et al.*, 1995:11).

5.4.1.1. Multiple Regression

Multiple regression is the appropriate method of analysis when the research problem involves a single metric dependent variable presumed to be related to one or more metric independent variables. The objective of multiple regression analysis is to predict the changes in the dependant variable in response to changes in the several independent variables. This objective is most often achieved through the statistical rule of least squares.

Whenever the researcher is interested in predicting the amount or magnitude of the dependant variable, multiple regression is useful. For example, monthly expenditures on dining out (dependant variable) might be predicted from information regarding a family's income, it's size, and the age of the head of household (independent variables). Similarly, the researcher might attempt to predict a company's sales from information on its expenditures for advertising, the number of salespeople, and the number of stores carrying its products.

5.4.1.2. Factor Analysis

Factor analysis, including variations such as component analysis and common factor analysis, is a statistical approach that can be used to analyse interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions (factors). The objective is to find a way of condensing the information contained in a number of original variables into a smaller set of variables.

5.4.1.3. Structural Equation Modelling

Structural equation modelling is a technique that allows separate relationships for each of a set of dependant variables. In its simplest sense, structural equation modelling provides the appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated simultaneously. It is characterised by two basic components; the structural model and the measurement model.

The structural model is the 'path' model, which relates independent to dependant variables. In such situations, theory, prior experience, or other guidelines allow the researcher to distinguish which independent variables predict each dependant variable.

The measurement model allows the researcher to use several variables (indicators) for a single independent or dependant variable. For example, the dependant variable might be a concept represented by a summated scale, such as self-esteem. In the measurement model the researcher can assess the contribution of each scale item as well as incorporate how well the scale measures the concept (reliability) into the estimation of the relationships between dependant and independent variables. The procedure is similar to performing a factor analysis of the scale item and using the factor scores in the regression.
The Perception value of the SERVQUAL scale will be used during Structural equation modelling because:

Performance based or perceptions-only measures of service quality have shown the following two elements:

(1) Higher correlation's with other measures of the same construct (convergent validity).
(2) Higher correlation's with other conceptually related constructs (Pitt *et al.*, 1997).

5.4.2. Selection of multivariate techniques for this study

The analyst needs to make three judgements concerning the research objective and nature of the data:

(1) Can the variables be divided into independent and dependent classifications based on some theory?

The answer to this question indicates whether a dependence or interdependence technique should be utilised. A dependence technique may be defined as one in which a variable or set of variables is identified as the dependent variable to be predicted or explained by other variables known as independent variables. An example of a dependence technique is multiple regression analysis. In contrast, an interdependence technique is one in which no single variable or group of variables is defined as being independent or dependent. Rather, the procedure involves the analysis of all variables in the set simultaneously. Factor analysis is an example of an interdependence technique.

(2) If they can, how many variables are treated as dependent in a single analysis?

Dependence techniques can be classified as those having a single dependent variable, several dependant variables, or even several dependent/independent relationships.

(3) How are the variables measured?

Dependence techniques can be further classified as those with either metric (quantitative/numerical) or non-metric (qualitative/categorical) dependent variables. If the analysis involves a single dependent variable that is metric, the appropriate technique is either multiple regression analysis or conjoint analysis. On the other hand, if the single dependent variable is non-metric (categorical), then the appropriate techniques are multiple discriminant analysis and linear probability models.

When the research problem involves several dependent variables, four other techniques of analysis are appropriate. If the several dependent variables are metric, we must then look to the independent variables. If the independent

variables are non-metric, the technique of multivariate analysis of variance should be selected. If the independent variables are metric, canonical correlation is appropriate. If the several dependent variables are non-metric, then they can be transformed through dummy variable coding (0-1) and canonical analysis can again be used. Finally, if a set of dependent/independent variable relationships is postulated, then structural equation modelling is appropriate.

With interdependence techniques, the variables cannot be classified as either dependent or independent. Instead, all the variables are analysed simultaneously in an effort to find an underlying structure to the entire set of variables or subjects. If the structure of variables is to be analysed, then factor analysis is the appropriate technique. If cases of respondents are to be grouped to represent structure, then cluster analysis is selected. Finally, if the interest is in the structure of objects, the techniques of multidimensional scaling should be applied.

Selection of the appropriate multivariate technique to be utilised depends on the answers of these three questions (Hair *et al.*, 1984:25).

5.4.3. Methods and Scope of the Investigation

Qualitative objectives:

(1) To develop a visual representation of an Internet service providers service design by utilising service blueprinting.

Service blueprinting will be used to describe the service delivery process of the Internet Service provider. As mentioned earlier in-depth interviews with key manager provides the information for drawing the blueprints.

(2) To determine the fail-points in service delivery from the subscribers point of view.

The qualitative question referring to service delivery failures and recovery failures mentioned above is used and the responses mapped back to the the subscriber lifecycle.

(3) To prioritise fail-point to be addressed within the ISP.

Fail-points are prioritised using the frequency of occurrence of the fail-points and recovery failures within the sample.

Empirical objectives:

(1) Testing the reliability and validity of the SERVQUAL instrument for the measurement of service quality in the Internet industry.

The reliability of the SERVQUAL scale is appraised with reliability/item analysis.

The following hypotheses are tested:

H1: The compound SERVQUAL scale is a reliable measure of service quality within the Internet industry.
H2: The core service dimension of the SERVQUAL scale is reliable.
H3: The tangible dimension of the SERVQUAL scale is reliable.
H4: The reliability dimension of the SERVQUAL scale is reliable.
H5: The responsiveness dimension of the SERVQUAL scale is reliable.
H6: The assurance dimension of the SERVQUAL scale is reliable.
H7: The empathy dimension of the SERVQUAL scale is reliable.
H8: Reliability is the most important contributor to service quality within the Internet industry (Nitecki, 1997).

The validity of the SERVQUAL scale is assessed with confirmatory factor analysis.

The following hypotheses are tested:

H9: The compound SERVQUAL scale is valid for the Internet industry.
H10: The reliability factor is valid.
H12: The responsiveness factor is valid.
H13: The assurance factor is valid.
H14: The empathy factor is valid.

(2) Empirically confirming interrelationships between service quality, customer satisfaction and relationship quality.

Structural equation modelling is applied in order to establish the following causal hypotheses:

H15: Service quality leads to customer satisfaction.
H16: Customer satisfaction leads to relationship quality
H17: Service quality leads to relationship quality

(3) Testing hypotheses around different flow clusters with respect to customer satisfaction.

ANOVA analysis is used to establish if significant differentiation occurs within customer satisfaction between the different flow clusters. The following hypotheses will be tested:

H18: There is a significant difference between the different communication flow clusters with respect to customer satisfaction in the Internet industry.

H19: There is a significant difference between the different surfing flow clusters with respect to customer satisfaction in the Internet industry.
H20: There is a significant difference between the different transaction flow clusters with respect to customer satisfaction in the Internet industry.

(4) Testing hypothesis around a proposed relationship between value added services and respectively service quality, customer satisfaction and relationship quality.

The relationships between value added services and the other constructs within the model are to be tested for significance by using multiple regression analysis. The following hypotheses will be tested:

H21: Value added services satisfaction (independent variable) has a positive relationship towards service quality (dependent variable) within the Internet industry.
H22: Value added services satisfaction (independent variable) has a positive relationship towards customer satisfaction (dependent variable) within the Internet industry.
H23: Value added services satisfaction (independent variable) has a positive relationship towards relationship quality (dependent variable) within the Internet industry.

(5) Testing hypothesis around a proposed relationship between Internet satisfaction and respectively service quality, customer satisfaction and relationship quality.

The relationships between Internet satisfaction and the other constructs within the model are to be tested for significance by using multiple regression analysis. The following hypotheses will be tested:

H24: Internet satisfaction (independent variable) has a positive relationship towards service quality (dependent variable) within the Internet industry.
H25: Internet satisfaction (independent variable) has a positive relationship towards customer satisfaction (dependent variable) within the Internet industry.
H26: Internet satisfaction (independent variable) has a positive relationship towards relationship quality (dependent variable) within the Internet industry.

(6) Testing the relationship between relationship quality and customer retention.

The relationships between relationship quality and customer retention will be tested for significance by using multiple regression analysis. The following hypothesis will be tested:

H27: Relationship quality has a positive relationship to customer retention.

5.4.4 Terminology

Some of the critical terms used in the finding chapter will now be reviewed to assist the reader with the interpretation and understanding of Chapter 6:

- ✓ The **coefficient of determination (R-square)** represents the measure of the proportion of the variance of the dependent variable about its mean that is explained by the independent, or predictor, variables. The coefficient can vary between zero and one. If the regression model is properly applied and estimated, the analyst can assume that the higher the value of the R-square, the greater the explanatory power of the regression equation, and therefore the better the prediction of the criterion variable.

- ✓ **Correlation coefficient (r)** indicates the strength of the association between the dependent and independent variables. The sign (+ or -) indicates the direction of the relationship. The value can range from −1 to +1, with +1 indicating a perfect positive relationship, zero indicating no relationship, and −1 indicating a perfect negative or reverse relationship (as one grows larger, the other grows smaller).

- ✓ **Degrees of freedom (df)** are calculated from the total number of observations minus the number of estimated parameters. Degrees of freedom provide a measure of how restricted the data are to reach a level of prediction. If the degrees of freedom are small, this suggests that the resulting prediction may be less generalisable, because all but a few observations were incorporated in the prediction. Conversely, a large degree of freedom value indicates that the prediction is fairly 'robust' with regard to being representative of the overall sample of respondents.

- ✓ **Power** can be seen as the probability that a significant relationship will be found if it actually exists. This complements the more widely used significance level alpha.

- ✓ **Specification error** represents the error in predicting the dependent variable caused by excluding one or more relevant independent variables that can bias the estimated coefficients of the included variables, as well as decrease the overall predictive power of the regression model.

- ✓ The term **standardisation** is used when, using standardised data, the regression coefficients are known as beta coefficients, which allow the researcher to compare the relative effect of each independent variable on the dependent variable.

5.5. Summary of Chapter 5

Chapter 5 reviews the measurement questions, sampling, collection as well as the scope and methods of analysis. In the following chapter the focus will move to the key finding and recommendations when the proposed model is empirically tested and qualitative insight is obtained in the service delivery process of the Internet service provider.

Chapter 6
Findings and Recommendations

Literature Study	**Internet Services** **The Marketing of Services** **Relationship Marketing** **Interrelationships between constructs**
Methodology	**Survey and Analysis**
Qualitative Findings	**Visualisation of Internet Service provision** **Service breakpoints (Fail Points)**
Quantitative Findings	**SERVQUAL** **Interrelationships between constructs**
Recommendations	**Defining a portfolio of projects**
	Academic recommendations

In this chapter the following elements will be covered in order fulfil the objectives stated within the problem statement in Chapter 1:

(1) Internet service delivery will be blueprinted in order to gain a more holistic understanding of consumer Internet service delivery
(2) Fail-points in service delivery will be identified and prioritised from the customers viewpoint
(3) All of the hypotheses stated in Chapter 5 will be empirically tested – the reliability and validity of the SERVQUAL scale, the flow construct as profiling construct and interrelationships of constructs as modelled
(4) A portfolio of projects will be suggested to positively influence the respective constructs within the model
(5) Academic recommendations will be given with relevance to future research

6.1 Qualitative Findings

To develop a visual representation of an Internet service providers service design by utilising service blueprinting.

As mentioned in Chapter Two, a service blueprint is essentially the product component within the marketing mix of a services firm. Blueprinting is thus the point of departure for service design, measurement and execution.

Blueprinting was used in this study to assure that every action type between the service provider and the subscriber is measured within the SERVQUAL instrument. The second reason for utilising blueprinting is that certain fail-points can be isolated for improvement.

Figure 6.1. Overview of the blueprint for consumer Internet services.

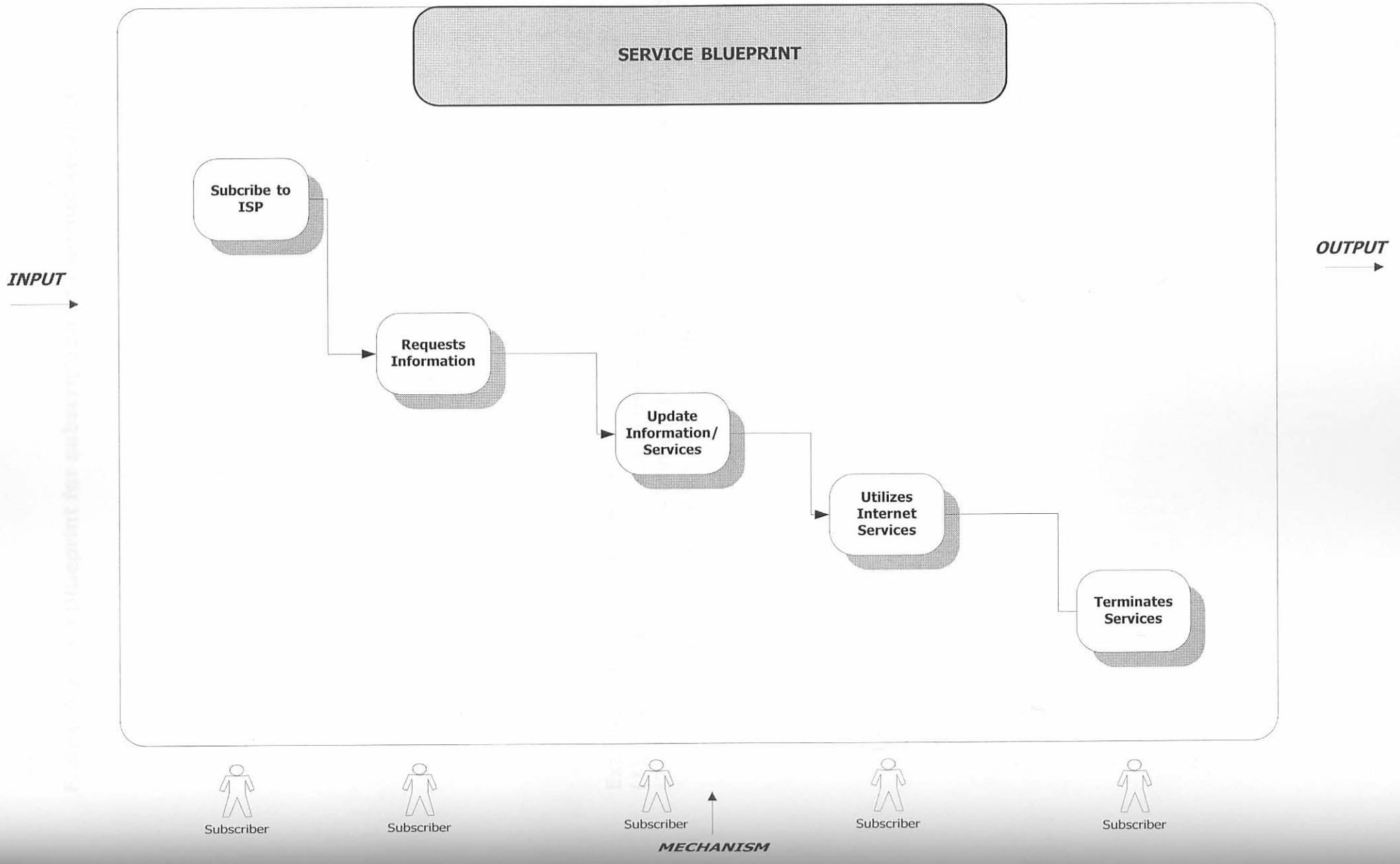


Figure 6.2. The Blueprint for subscription to Internet services.

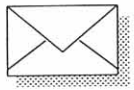
Examples of potential fail-points:

(1) No credit checking process in the registration process.

(2) No incentive or measurement of service level agreements with clients to be fully register within 24 hours after application.

SUBSCRIPTION TO INTERNET SERVICES

Fax



Electronic Registration

INPUT

Retailer

Potential Subscriber

Credit Card/ Cheque

Receive Registration Details

- Call Center staff received registration information via fax, retailer,electronic registration

Validate Registration Information

- Call Center staff verified information completeness and integrity

Register Subscriber

- Call Center staff registered subscriber on mail server, connectivity data base & billing system

Communicate Set Up Details

- Call Center staff faxed login details & set up instructions to new subscriber

Generate Invoice & Collect Payment

- Invoice monthy/ annually generated by billing system
- Subscriber's account debited

Login Details & Set up Instruction

OUTPUT

Registered Subscriber

Call Center Agent

Call Center Agent

Call Center Agent

MECHANISM

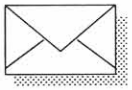
Call Center Agent

Billing System

Figure 6.3. The Blueprint for requesting information from an ISP.

Examples of potential fail-points:
(1) The support consultant does not reply to the subscriber.
(2) The information is not available to be disseminated.


Fax


E-Mail

INPUT


ISP Office


Web Site


Telephone Call

SUBSCRIBER REQUESTS INFORMATION

Route Information Request

- Call Center staff routed information request to Marketing/ Operational Department

Locate/ Generate Information

- Marketing/ Operational Department/ Call Center staff located/ generated information

Communicate Information

- Call Center staff registered subscriber on mail server, connectivity data base & billing system


Fax


ISP Office

OUTPUT


E-Mail


Web Site


Telephone Call


Call Center Agent


Call Center Agent


Marketing/ Operational Department

MECHANISM


Call Center Agent


Marketing/ Operational

Figure 6.4. The Blueprint for updating subscriber information.

Examples of potential fail-points:

(1) A subscriber does not update the service provider.
(2) The changes are not successfully executed on all the systems it needs to be.

Fax

E-Mail

INPUT

ISP Office

Web Site

Telephone Call

SUBSCRIBER UPDATES PERSONAL INFORMATION

Receive Information Update Request

- Call Center staff received request to update subscriber's banking/personal details

Update Information

- Call Center staff updated information on billing system, mail system, connectivity data base

Confirm Details Changed

- Call Center staff confirmed changed details via fax

Fax

OUTPUT

Call Center Agent

Call Center Agent

MECHANISM

Call Center Agent

Figure 6.5. The Blueprint for cancellation of Internet services.

Examples of potential fail-points:
(1) The call centre consultant does not always obtain cancellation reasons.
(2) No active win-back strategy exists.

Fax

ISP Office

INPUT

Letter of Cancelation

SUBSCRIBER TERMINATES SUBSCRIPTION

Receive Cancellation Request

- Call Center staff received quest to cancel subscriber's services

Update Information

- Call Center staff updated information on billing system, mail system, connectivity data base stating reason for cancellation

Confirm Cancellation

- Call Center staff confirmed sercvice termination

Fax

OUTPUT

Call Center Agent

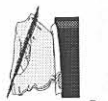
Call Center Agent

MECHANISM

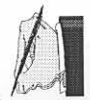
Call Center Agent

Figure 6.6. The Blueprint for service utilisation.

Examples of potential fail-points:
(1) The service is not available.
(2) No reason is provided why the service is not available.



User name & Password



User name & Password

INPUT

SUBSCRIBER UTILIZES SERVICES

Logs on to Internet

- Subscriber logged onto the Internet via Telkom line, Modem, and Personal Computer

Communicates via the Internet

- Subscriber sent & received e-mail and collaborated via news groups

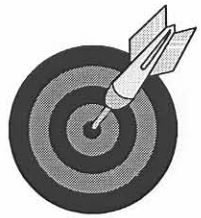
Surfs via Internet

- Subscriber viewed and requested information via the Internet

Transacts via Internet

- Subscriber engaged in financial transacting via the Internet

OUTPUT



Internet experience

Subscriber

Modem

Personal Computer

Subscriber

E-Mail software

MECHANISM

Subscriber

Internet Browser

Subscriber

Secure Internet Browser

Through the qualitative questions mentioned in the previous chapter, 582 fail point incidents were identified (Table 6.1). These fail points were then categorised in eight categories:

(1) Applying for services and distribution of service points–fail points categorised under this heading includes: No network point of presence within local telephone call range; time from service request/application to service activation is to long; problems in service activation; getting application forms or starter CD's.

(2) Setting system up for Internet usage: Configuration of modem, computer, browser, e-mail package and dial-up connectivity.

(3) Utilising Internet services: The fail points within this category will be divided between the ones that the ISP can control and the ones within the control of the network provider/SAIX (see Chapter 1 on virtual ISP's). SAIX is responsible for the dial-up connection (availability, reliability, speed) and newsgroups. The ISP is responsible for the e-mail server, Domain name server, and mail security.

(4) New product development, cross selling and value added services: New products like ISDN requested but not available, configuration and usage of value added services for example the 5 MB free personal hosting space.

(5) Service cancellation: Subscriber cancels service but invoicing continues or service is still active.

(6) Billing and invoicing systems: Wrong amounts subtracted from the subscribers bank account, no billing and sudden incorrect billings.

(7) Communication: Communication breakdown, calls are not returned, information is inaccurate, the web page does not work and telephone consultants are not available.

(8) Pro-active information dissemination: Informing subscribers about changes in service, configurations and value added services before it happens.

Table 6.1. Client Lifecycle fail-points.

Applying for Services	System configuration for Internet	Utilising the Internet	Value added services and new product cross selling	Service cancellation
No Point of presence in geographical area	Browser, e-mail, modem configuration	SAIX – Dial-up connection	New product development	Cancel subscription
Application process is to slow		SAIX – Availability of a connection	5 MB personal web-space	
Problems in service activation		SAIX – Reliability of a connection	Update services	
Getting hold of application forms, starter pack		SAIX – Speed of a connection		
		SAIX – Newsgroups		
		ISP – Mail		
		ISP – Domain name services		
		ISP – Mail security/ Spamming		
	BILLING	BILLING	BILLING	
COMMUNICATE	COMMUNICATE	COMMUNICATE	COMMUNICATE	COMMUNICATE
PRO-ACTIVE COMMUNICATE	PRO-ACTIVE COMMUNICATE	PRO-ACTIVE COMMUNICATE	PRO-ACTIVE COMMUNICATE	PRO-ACTIVE COMMUNICATE

The prioritising of fail-points to be addressed within the ISP is essential for the effective resolution of fail-points (Table 6.2).

Table 6.2. Fail-point priorities to be resolved.

	Failings	No Recovery Made	Fail Point Priority	Recovery Priority
APPLYING FOR SERVICES:				
Geographical POP availability	50%	50%	LOW	MEDIUM
Slow on signing a new subscriber up	0%	100%	LOW	**HIGH**
Problems in signing up as a subscriber	50%	50%	LOW	MEDIUM
Getting application forms/disk to get connected	67%	33%	LOW	LOW
SETTING SYSTEM UP FOR INTERNET:				
User settings	43%	57%	MEDIUM	**HIGH**
USING THE INTERNET - SAIX/NETWORK:				
Connection	69%	31%	**HIGH**	LOW
Availability of a connection	49%	51%	**HIGH**	**HIGH**
Reliability of a connection	77%	23%	**HIGH**	LOW
Speed	92%	8%	**HIGH**	LOW
Newsgroups	67%	33%	LOW	LOW
USING THE INTERNET - ISP:				
Mail Server	47%	53%	**HIGH**	**HIGH**
DNS server	33%	67%	LOW	**HIGH**
Security	0%	100%	LOW	**HIGH**
SPAM	50%	50%	LOW	MEDIUM
NEW PRODUCTS AND VALUE ADDED SERVICES:				
New product development	100%	0%	LOW	LOW
5 MB usage	100%	0%	LOW	LOW
Update services	50%	50%	LOW	MEDIUM
Cancel services	0%	0%	LOW	LOW
BILLING:				
Billing problems	78%	22%	MEDIUM	LOW
COMMUNICATING:				
Intekom home page	67%	33%	LOW	LOW
Communication breakdown	76%	24%	LOW	LOW
Wrong information / Inaccurate	50%	50%	LOW	MEDIUM
Empathy	100%	0%	LOW	LOW
PRO-ACTIVE INFORMATION DISSEMINATION:				
Pro-active information dissemination	44%	56%	LOW	**HIGH**

6.2 Empirical Findings

Testing the reliability and validity of the SERVQUAL instrument for the measurement of service quality in the Internet industry.

The reliability of each of the dimensions was assessed using the Cronbach (1951) alpha (Table 6.3). The tangibles dimension provides the most concern, because the reliability measures are below the 0.70 level required for commercial applications (Carman, 1990).

Is the compound SERVQUAL scale a reliable measure of service quality within the Internet industry?

Table 6.3. Reliability of the SERVQUAL scale.

Cronbach alpha: .903 Average inter-item correlation: .649	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
Core service dimension	0.489	0.294	0.925
Tangibility dimension	0.693	0.517	0.892
Reliability dimension	0.829	0.753	0.871
Responsiveness dimension	0.789	0.763	0.877
Assurance dimension	0.867	0.814	0.868
Empathy dimension	0.797	0.708	0.876

The SERVQUAL scale is a reliable measure of service quality within the Internet industry. The reliability of the scale is higher if the tangibility and core service dimensions are eliminated:

Table 6.4. Reliability of the SERVQUAL scale with core service and tangible dimensions omitted.

Cronbach alpha: .931 Average inter-item correlation: .784	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
Reliability dimension	0.815	0.709	0.918
Responsiveness dimension	0.869	0.771	0.899
Assurance dimension	0.894	0.809	0.896
Empathy dimension	0.790	0.694	0.925

Possible reasons for the low reliability of the core service and tangibility dimension is:

(1) The core service of bandwidth connectivity is hard to describe and conceptualise. The Internet experience moves the emphases towards application of the connectivity layer. It is thus possible that subscriber's bundle their judgement of the core service into their experience of the specific application that they use the Internet for.
(2) The tangibility of the service is not necessarily important for the subscriber since they are viewing the infrastructure, similar to telephone services, as an enabler and not a physical product. Tangibles can possibly be viewed as a quality surrogate by some. The interplay between these different perspectives towards tangibles may explain the unreliability of the dimension.

Is the core service dimension of the SERVQUAL scale reliable?

Reliability and Item analysis were done in order to establish the reliability of the core service dimension (Table 6.5).

Table 6.5. Reliability of the core service dimension.

Cronbach alpha: .730			
Average inter-item correlation: .477			
	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
1. The speed of your Internet connection	0.532	0.284	0.666
2. The reliability of the connection	0.591	0.351	0.598
3. The availability of a connection	0.546	0.302	0.656

Is the tangible dimension of the SERVQUAL scale reliable?

Reliability and Item analysis were done in order to establish the reliability of the tangibles dimension (Table 6.6).

Table 6.6. Reliability of the tangible dimension.

Cronbach alpha: .604			
Average inter-item correlation: .355			
	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
4. Technologically advanced infrastructure	0.435	0.194	0.476
5. Customer friendliness of the	0.424	0.183	0.515

Internet service provider			
6. Visually pleasing materials associated with the products and services	0.426	0.181	0.526

Is the reliability dimension of the SERVQUAL scale reliable?

The reliability of the SERVQUAL scale reliability dimension was investigated (Table 6.7).

Table 6.7. Reliability of the reliability dimension.

Cronbach alpha: .854			
Average inter-item correlation: .508			
	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
7. When promising to do something, the ISP does so	0.680	0.549	0.822
8. When customers have a problem, the ISP shows a sincere interest in solving it	0.710	0.577	0.818
9. Carrying out all service correctly the first time	0.683	0.508	0.823
10. Providing the service at the promised time	0.727	0.577	0.813
11. Providing error free documentation	0.547	0.333	0.846
12. Keeping customers informed about when services will be performed	0.525	0.311	0.854

Statements 11 and 12 had a low multiple R. Reasons for this might include:

(1) P11: Providing error free documentation, like keeping records and Internet explorer set-up instructions. It is possible that this statement has a low reliability because of the examples mentioned in brackets. One example is internal to the organisation and the other external. This could have led to misinterpretation of the meaning of the statement.

(2) P12: Keeping customers informed about when services will be performed, like delivery, invoicing, follow-up, maintenance and enhancements. The low reliability of this statement may be due to the 'black box' nature of Internet services for some subscribers. They might expect that communication would be to technical for them to make sense from it. They just want to be assured of service delivery.

Is the responsiveness dimension of the SERVQUAL scale reliable?

The reliability of the responsiveness of the SERVQUAL scale was investigated (Table 6.8).

Table 6.8. Reliability of the responsiveness dimension.

Cronbach alpha: .867			
Average inter-item correlation: .698			
	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
13. Prompt service to customers	0.733	0.545	0.840
14. Willingness to help customers	0.737	0.561	0.830
15. Readiness to respond to customer's requests	0.795	0.636	0.768

Is the assurance dimension of the SERVQUAL scale reliable?

The reliability of the assurance dimension of the SEVQUAL scale was investigated (Table 6.9).

Table 6.9. Reliability of the assurance dimension.

Cronbach alpha: .902			
Average inter-item correlation: .613			
	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
16. The attitude and behaviour of employees that instils confidence in customers	0.801	0.674	0.874
17. Customers that feel secure in their involvement	0.765	0.602	0.880
18. Ensuring that problems are resoled above expectation	0.758	0.600	0.882
19. Employees that are always courteous with customers	0.686	0.533	0.893
20. Being a credible Internet service provider	0.682	0.476	0.892
21. Employees that have the knowledge to answer customers questions	0.724	0.529	0.886

Statement number 20: "Being a credible Internet Service Provider with trustworthiness, integrity and honesty, name and reputation." had a low squared Multiple R. A potential reason for this might be that conflict of perceptions regarding Telkom and it's subsidiaries exists. Some subscriber's may have a very positive association with Telkom's name and reputation while other might see them as monopolistic and arrogant. The reference to

integrity and reputation within the same description might thus lead to a high level of divergence in responses based on sentiments rather than the understanding of the question. In other words it is possible that this statement might elicit, in some instances, an emotional rather than a rational response.

Is the empathy dimension of the SERVQUAL scale reliable?

The reliability of the empathy dimension of the SERVQUAL scale was investigated (Table 6.10).

Table 6.10. Reliability of the empathy dimension.

Cronbach alpha: .909731			
Average inter-item correlation: .636404			
	Item-to-Total Correlation	Squared Multiple R	Alpha if Deleted
22. Always being approachable	0.658	0.450	0.906
23. Treating customers with empathy	0.758	0.593	0.894
24. Keeping customers informed and listening to them	0.721	0.524	0.897
25. Providing personal attention	0.814	0.686	0.884
26. Have customer's best interests at heart	0.779	0.642	0.889
27. Understanding the specific needs of customers	0.782	0.623	0.888

Statement 22: "Always being approachable through means such as easy access to management, prompt telephone access and ease of contact." This statement possibly has a low reliability because mentioning "prompt telephone access" in brackets may be confusing to certain subscribers. The confusion can potentially exist between the concepts of Internet telephone access and support telephone access. In other words some subscribers may be judging their perceptions and expectations of the support centre while others rates the dial-up access nodes.

Does reliability have the highest correlation to the compound service quality scale within the Internet industry?

A confirmatory factor analysis around reliability and compound service quality within the SERVQUAL scale (Table 6.11).

Table 6.11. Confirmatory Factor analysis of SERVQUAL.

Dimensions	SEPATH Syntax	Parameter Estimate	Probability Level
Reliability	(Service Quality)-1->[RELP]	0.844	0.000
Responsiveness	(Service Quality)-2->[RESPO]	0.893	0.000
Assurance	(Service Quality)-3->[ASSURP]	0.936	0.000
Empathy	(Service Quality)-4->[EMPAP]	0.840	0.000

It is interesting to note that reliability does not have the highest correlation to the overall SERVQUAL measure within the Internet industry. Reliability is the third highest dimension while assurance is the highest dimension. Note the high model fit – Joreskog GFI = 0.930.

The rational behind this can be:
Technology can be viewed as the 'hard issues'. The importance of the assurance dimension communicates a high standard of conduct, trust and skilled employees to assist subscribers with their Internet experience. In short the human element is very important in guiding a subscribers quality perception of an ISP.

Is the compound SERVQUAL scale valid for the Internet industry?

The validity of the compound SERVQUAL scale for the Internet industry was investigated, please refer again to Table 6.11.

The SERVQUAL scale has a highly satisfactory validity for measuring service quality within the Internet industry.

Is the reliability factor valid?

The reliability factor of the SEVQUAL scale was investigated by doing a confirmatory factor analysis of the items within the dimension (Table 6.12).

Table 6.12. Confirmatory Factor Analysis for the reliability dimension.

Items	SEPATH Syntax	Parameter Estimate	Probability Level
7. When promising to do something, the ISP does so	(Reliability)-1->[P7]	0.773	0.000
8. When customers have a problem, the ISP shows a sincere interest in solving it	(Reliability)-2->[P8]	0.801	0.000
9. Carrying out all service correctly the first time	(Reliability)-3->[P9]	0.733	0.000
10. Providing the service at the promised time	(Reliability)-4->[P10]	0.816	0.000
11. Providing error free	(Reliability)-5->[P11]	0.518	0.000

documentation			
12. Keeping customers informed about when services will be performed	(Reliability)-6->[P12]	0.509	0.000

Note the high model fit – Joreskog GFI = 0.939.

Next the responsiveness factor will be investigated for validity:

The responsiveness of the SERVQUAL scale was investigated by doing a confirmatory factor analysis of the items within the dimension (Table 6.13).

Table 6.13. Confirmatory Factor Analysis for the responsiveness dimension.

Items	SEPATH Syntax	Parameter Estimate	Probability Level
13. Prompt service to customers	(Responsiveness)-1->[P13]	0.790	0.000
14. Willingness to help customers	(Responsiveness)-2->[P14]	0.794	0.000
15. Readiness to respond to customer's requests	(Responsiveness)-3->[P15]	0.905	0.000

The assurance factor is next for validation:

The assurance factor of the SERVQUAL scale was investigated through confirmatory factor analysis (Table 6.14).

Table 6.14. Confirmatory Factor Analysis for the assurance dimension.

Items	SEPATH Syntax	Parameter Estimate	Probability Level
16. The attitude and behaviour of employees that instils confidence in customers	(Assurance)-1->[P16]	0.854	0.000
17. Customers that feel secure in their involvement	(Assurance)-2->[P17]	0.804	0.000
18. Ensuring that problems are resoled above expectation	(Assurance)-3->[P18]	0.797	0.000
19. Employees that are always courteous with customers	(Assurance)-4->[P19]	0.724	0.000
20. Being a credible Internet service provider	(Assurance)-5->[P20]	0.697	0.000
21. Employees that have the knowledge to answer customers questions	(Assurance)-6->[P21]	0.753	0.000

Note the high model fit – Joreskog GFI = 0.951.

The validity of the empathy dimension will now be investigated:

The empathy factor of the SERVQUAL scale was investigated with confirmatory factor analysis (Table 6.15).

Table 6.15. Confirmatory Factor Analysis for the empathy dimension.

Items	SEPATH Syntax	Parameter Estimate	Probability Level
22. Always being approachable	(Empathy)-1->[P22]	0.665	0.000
23. Treating customers with empathy	(Empathy)-2->[P23]	0.787	0.000
24. Keeping customers informed and listening to them	(Empathy)-3->[P24]	0.752	0.000
25. Providing personal attention	(Empathy)-4->[P25]	0.878	0.000
26. Have customer's best interests at heart	(Empathy)-5->[P26]	0.837	0.000
27. Understanding the specific needs of customers	(Empathy)-6->[P27]	0.822	0.000

As with the other dimensions, the assurance dimension has a satisfactory level of validity in the measurement of service quality within the Internet industry. Note the high model fit – Joreskog GFI = 0.974.

Attention now turns to structural equation modelling for the empirical confirmation of the interrelationships between service quality, customer satisfaction and relationship quality:

Before the Structural equation modelling technique can be applied to this hypothesis, the SERVQUAL scale needs to be 'cleaned' from all significant covariance and unreliability's.

First the core service and tangibility dimensions of the SERVQUAL scale will be eliminated to reach a measurement instrument with higher reliability as already illustrated in Table 6.4.

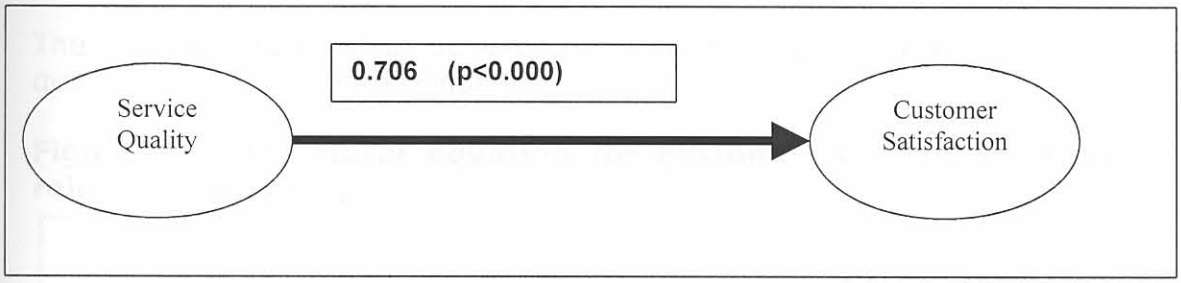
Then covariance will be investigated in order to 'clean' the service quality construct. Variables with a covariance of 0.8 or higher will be eliminated from the correlation matrix except if the variables are part of the same dimension and thus per definition highly correlated (Table 6.16). The highlighted fields indicate these conceptually highly correlated dimensions. The researcher decided on the 0.8 level for elimination because the constructs and dimension are highly interrelated from a conceptual view. In Table 6.16 it can be observed that none of the variables, except the conceptually related ones, exceed the proposed 0.8 level of covariance. No items will thus be eliminated for the structural equation process.

Table 6.16. Correlation Matrix for the SERVQUAL items and dimensions.

	P7	P8	P9	P10	P11	P12	RELP	P13	P14	P15	RESPO	P16	P17	P18	P19	P20	P21	ASSURP	P22	P23	P24	P25	P26	P27	EMPAP
P7	**1.00**	0.70	0.52	0.63	0.39	0.38	**0.85**	0.69	0.52	0.61	0.69	0.54	0.51	0.55	0.44	0.46	0.49	0.61	0.49	0.45	0.37	0.47	0.44	0.42	0.53
P8	0.70	**1.00**	0.58	0.64	0.40	0.39	**0.86**	0.67	0.72	0.74	0.79	0.70	0.57	0.63	0.56	0.51	0.59	0.73	0.51	0.58	0.42	0.55	0.48	0.47	0.60
P9	0.52	0.58	**1.00**	0.66	0.46	0.41	**0.81**	0.57	0.52	0.58	0.62	0.59	0.53	0.60	0.46	0.52	0.60	0.67	0.46	0.50	0.46	0.51	0.47	0.48	0.58
P10	0.63	0.64	0.66	**1.00**	0.42	0.43	**0.87**	0.66	0.53	0.61	0.68	0.60	0.56	0.59	0.49	0.49	0.49	0.66	0.47	0.49	0.43	0.49	0.49	0.45	0.57
P11	0.39	0.40	0.46	0.42	**1.00**	0.49	0.49	0.44	0.44	0.46	0.50	0.43	0.45	0.45	0.38	0.40	0.43	0.52	0.45	0.38	0.41	0.43	0.40	0.42	0.50
P12	0.38	0.39	0.41	0.43	0.49	**1.00**	0.48	0.45	0.43	0.42	0.49	0.44	0.46	0.48	0.36	0.45	0.40	0.53	0.41	0.40	0.54	0.42	0.44	0.44	0.53
RELP	**0.85**	**0.86**	**0.81**	**0.87**	0.49	0.48	**1.00**	0.77	0.67	0.75	**0.82**	0.71	0.64	0.70	0.57	0.58	0.64	0.78	0.57	0.59	0.50	0.60	0.55	0.54	0.67
P13	0.69	0.67	0.57	0.66	0.44	0.45	0.77	**1.00**	0.64	0.72	**0.90**	0.64	0.58	0.65	0.50	0.53	0.56	0.71	0.55	0.55	0.46	0.57	0.55	0.53	0.64
P14	0.52	0.72	0.52	0.53	0.44	0.43	0.67	0.64	**1.00**	0.73	**0.87**	0.69	0.57	0.58	0.65	0.50	0.63	0.73	0.56	0.66	0.48	0.58	0.50	0.50	0.65
P15	0.61	0.74	0.58	0.61	0.46	0.42	0.75	0.72	0.73	**1.00**	**0.91**	0.76	0.64	0.67	0.62	0.58	0.63	0.79	0.59	0.65	0.50	0.59	0.54	0.55	0.68
RESPO	0.69	0.79	0.62	0.68	0.50	0.49	**0.82**	**0.90**	**0.87**	**0.91**	**1.00**	0.78	0.67	0.71	0.65	0.60	0.68	**0.83**	0.63	0.69	0.54	0.65	0.60	0.59	0.74
P16	0.54	0.70	0.59	0.60	0.43	0.44	0.71	0.64	0.69	0.76	0.78	**1.00**	0.67	0.68	0.71	0.57	0.66	**0.87**	0.58	0.68	0.53	0.63	0.57	0.56	0.71
P17	0.51	0.57	0.53	0.56	0.45	0.46	0.64	0.58	0.57	0.64	0.67	0.67	**1.00**	0.70	0.55	0.62	0.60	**0.85**	0.58	0.60	0.53	0.62	0.62	0.60	0.71
P18	0.55	0.63	0.60	0.59	0.45	0.48	0.70	0.65	0.58	0.67	0.71	0.68	0.70	**1.00**	0.53	0.58	0.63	**0.85**	0.54	0.56	0.52	0.59	0.57	0.54	0.66
P19	0.44	0.56	0.46	0.49	0.38	0.36	0.57	0.50	0.65	0.62	0.65	0.71	0.55	0.53	**1.00**	0.53	0.56	0.77	0.55	0.75	0.48	0.62	0.51	0.52	0.68
P20	0.46	0.51	0.52	0.49	0.40	0.45	0.58	0.53	0.50	0.58	0.60	0.57	0.62	0.58	0.53	**1.00**	0.56	0.78	0.53	0.56	0.52	0.56	0.55	0.54	0.66
P21	0.49	0.59	0.60	0.49	0.43	0.40	0.64	0.56	0.63	0.63	0.68	0.66	0.60	0.63	0.56	0.56	**1.00**	**0.81**	0.59	0.61	0.53	0.57	0.54	0.55	0.68
ASSURP	0.61	0.73	0.67	0.66	0.52	0.53	0.78	0.71	0.73	0.79	**0.83**	**0.87**	**0.85**	**0.85**	0.77	0.78	**0.81**	**1.00**	0.68	0.76	0.63	0.73	0.68	0.67	**0.83**
P22	0.49	0.51	0.46	0.47	0.45	0.41	0.57	0.55	0.56	0.59	0.63	0.58	0.58	0.54	0.55	0.53	0.59	0.68	**1.00**	0.61	0.54	0.57	0.55	0.57	0.77
P23	0.45	0.58	0.50	0.49	0.38	0.40	0.59	0.55	0.66	0.65	0.69	0.68	0.60	0.56	0.75	0.56	0.61	0.76	0.61	**1.00**	0.61	0.71	0.63	0.63	**0.83**
P24	0.37	0.42	0.46	0.43	0.41	0.54	0.50	0.46	0.48	0.50	0.54	0.53	0.53	0.52	0.48	0.52	0.53	0.63	0.54	0.61	**1.00**	0.65	0.62	0.64	**0.81**
P25	0.47	0.55	0.51	0.49	0.43	0.42	0.60	0.57	0.58	0.59	0.65	0.63	0.62	0.59	0.62	0.56	0.57	0.73	0.57	0.71	0.65	**1.00**	0.75	0.70	**0.88**
P26	0.44	0.48	0.47	0.49	0.40	0.44	0.55	0.55	0.50	0.54	0.60	0.57	0.62	0.57	0.51	0.55	0.54	0.68	0.55	0.63	0.62	0.75	**1.00**	0.72	**0.86**
P27	0.42	0.47	0.48	0.45	0.42	0.44	0.54	0.53	0.50	0.55	0.59	0.56	0.60	0.54	0.52	0.54	0.55	0.67	0.57	0.63	0.64	0.70	0.72	**1.00**	**0.86**
EMPAP	0.53	0.60	0.58	0.57	0.50	0.53	0.67	0.64	0.65	0.68	0.74	0.71	0.71	0.66	0.68	0.66	0.68	**0.83**	0.77	**0.83**	**0.81**	**0.88**	**0.86**	**0.86**	1.00

The first structural equation that will be investigated is if service quality lead to customer satisfaction: (Figure 6.7).

Figure 6.7. Structural equation for service quality leads to customer satisfaction



The 0.706 parameter estimate at $p<0.000$ confirms that a high level of causality exists from service quality to customer satisfaction. This confirms the first linkage described in Chapter 4. This finding can support Service quality investments within the Internet industry in aid of higher customer satisfaction. Note the high model fit – Joreskog GFI = 0.934.

Does customer satisfaction lead to relationship quality?

As in Table 6.16 above covariance will firstly be investigated in order to 'clean' the relationship quality construct. Variables with a covariance of 0.8 or higher will be eliminated from the correlation matrix (Table 6.17).

Table 6.17. Correlation Matrix of relationship quality.

	RELCONT	SERCONT	SERVADD	RECOMM
RELCONT	1.000	**0.813**	0.641	0.792
SERCONT	**0.813**	1.000	0.639	**0.807**
SERVADD	0.641	0.639	1.000	0.683
RECOMM	0.792	**0.807**	0.683	1.000

The service continuation (SERCONT) variable will be eliminated from the analysis in order to minimise covariance.

This high level of covariance is interesting because it can be derived that the question: "Based on your experience with Intekom, how likely are you to continue using the services that you are currently using?", co-varies with the sentiments of relationship continuation and recommendation.

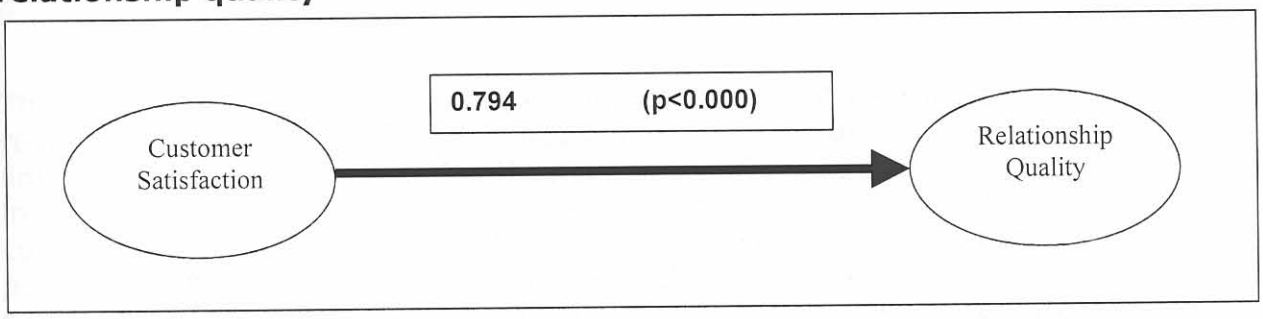
The 'cleaned' correlation matrix has no covariance above 0.8 (Table 6.18).

Table 6.18. Refined Correlation Matrix of relationship quality.

	RELCONT	SERVADD	RECOMM
RELCONT	1.000	0.641	0.792
SERVADD	0.641	1.000	0.683
RECOMM	0.792	0.683	1.000

The causal relationship between customer satisfaction and relationship quality was investigated (Figure 6.8).

Figure 6.8. Structural equation for customer satisfaction leads to relationship quality



The 0.794 parameter estimate at $p<0.000$ confirms that a high level of causality exists from customer satisfaction to relationship quality. This confirms the second linkage described Chapter Four. The fact that customer satisfaction thus leads to the following positive subscriber sentiments are thus proven. Note the high model fit - Joreskog GFI = 0.991.

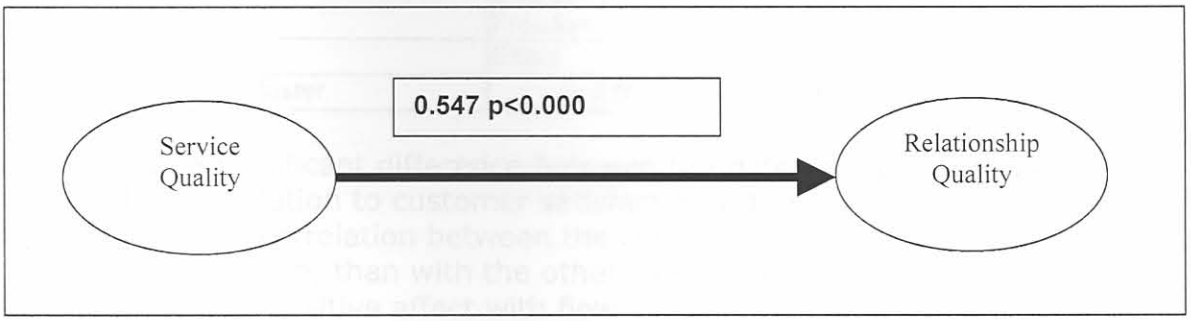
Customer satisfaction leads to:

(1) Higher ratings on the overall quality of the subscriber's relationship with Intekom.
(2) If the subscriber were in the situation to reconsider their relationship with Intekom they would be likely to continue their relationship with them.
(3) The subscriber would be more likely to use/buy additional services from Intekom in the future.
(4) A subscriber would be likely to recommend Intekom to a friend, colleague or acquaintances if asked to recommend a company for Internet services.

Does service quality lead to relationship quality?

Whether or not service quality leads to relationship quality was investigated (Figure 6.9).

Figure 6.9. Structural equation for service quality leads to relationship quality



The 0.547 parameter estimate at p<0.000 confirms that a strong casual relationship exists from service quality and relationship quality. The third linkage described in Chapter 4 is thus supported. Service quality improvements can also lead to the positive outcomes mentioned within the customer satisfaction – relationship quality link described above. The parameter estimate is lower for this relationship than the customer satisfaction – relationship quality linkage. This finding alludes to confirmation of the sequence; service quality leads to customer satisfaction, which in turn leads to relationship quality, as described in Chapter Four. Note the high model fit – Joreskog GFI = 0.940.

Testing the hypothesis around different flow bond clusters with respect to customer satisfaction proves there is a significant difference between the different communication flow clusters with respect to customer satisfaction in the Internet industry.

Table 6.19. Differentiation of customer satisfaction based on different communication flow clusters.

	CUSTOMER SATISFACTION
Anxiety	76.454
Flow	84.166
Boredom	77.442

The Index values mentioned in the customer satisfaction column refers to a percentage value.

Table 6.20. Power of differentiation based on different communication flow clusters.

	Degrees of Freedom	
	Effect	p-level
Communication flow cluster	2.000	0.000

There exists a significant difference between the different communication flow clusters in relation to customer satisfaction within the Internet industry. Signs of a higher correlation between the communication 'flow' cluster and customer satisfaction, than with the other clusters leads, to confirmation of the association of positive affect with flow.
Whether or not there is a significant difference between the different surfing flow clusters with respect to customer satisfaction in the Internet industry was investigated (Tables 6.21. and 6.22).

Table 6.21. Differentiation of customer satisfaction based on different surfing flow clusters.

	CUSTOMER SATISFACTION
Anxiety	82.883
Flow	76.198
Boredom	77.500

The Index values mentioned in the customer satisfaction column refers to a percentage value.

Table 6.22. Power of differentiation based on different surfing flow clusters.

	Degrees of Freedom	
	Effect	p-level
Surfing flow cluster	2.000	0.000

There exists a significant difference between the different surfing flow clusters in relation to customer satisfaction within the Internet industry. The researcher did not expect the higher correlation of anxiety with customer satisfaction.

A possible explanation of this could be that no true distinction exists between communication and surfing. Surfing can simply be interpreted as communicating with a Web server.

Is there a significant difference between the different transaction flow clusters with respect to customer satisfaction in the Internet industry?

Table 6.23. Differentiation of customer satisfaction based on different transaction flow clusters.

	CUSTOMER SATISFACTION
Anxiety	78.253
Flow	77.932
Boredom	80.521

The Index values mentioned in the customer satisfaction column refers to a percentage value.

Table 6.24. Power of differentiation based on different transaction flow clusters.

	Degrees of Freedom	
	Effect	p-level
Transaction flow cluster	2.000	0.165 **NOT SIGNIFICANT**

There does not exist a significant difference between the different transaction flow clusters in relation to customer satisfaction within the Internet industry. The researcher did not expect this finding.

A possible explanation of this could be that Internet transacting is not a leisure-related activity. Subscribers potentially view transacting as a commercial interaction and not a leisure experience. This is an interesting observation because this can be different from traditional 'bricks and mortar' shopping that can in some instances be viewed as a leisure related activity.

Testing hypothesis around a proposed relationship between value added services and respectively service quality, customer satisfaction and relationship quality:
When using multiple regression analysis the following condition will be excepted as significant because the sample size is just over 1000 respondents:

If the coefficient of determination (R square) is:

More than 0.001 for 2 independent variables
More than 0.01 for 1 independent variable
More than 0.02 for 10 independent variables
More than 0.02 for 20 independent variables

The parameter estimate will then explain 80% of the level of the coefficient of determination. (Hair *et al* 1996:104)

Does value added service satisfaction (independent variable) have a positive relationship towards service quality (dependent variable) within the Internet industry? (Table 6.25).

Table 6.25. The relationship between value added services and service quality.

R^2= .550	BETA	p-level
Intercept Point		0.000
E-MAIL SERVICE	0.313	0.000
INTERNET STARTER-KIT	0.213	0.006
TOLL-FREE SUPPORT	0.432	0.000

Value added service satisfaction has a strong positive relationship with service quality. It can thus be concluded that value added services do have a significant positive relationship with the perceived service quality of the service provider.

The toll-free customer support line, e-mail service and starter kit has a significant relationship with the service quality perception. From a toll free support desk perspective (essentially human contact) this finding is in line with the importance of assurance mentioned above.

Does value added service satisfaction (independent variable) have a positive relationship towards customer satisfaction (dependent variable) within the Internet industry? (Table 6.26).

Table 6.26. The relationship between value added services and customer satisfaction.

R^2= .371	BETA	p-level
Intercept Point		0.002
E-MAIL SERVICE	0.320	0.000
TOLL-FREE SUPPORT	0.287	0.000

A positive relationship does exist between value-added services and customer satisfaction. This finding can be viewed as a derivative of the value added service to service quality relationship discussed above. The premise of this is the causal relationships proven earlier in this section.

Does value added service satisfaction (independent variable) have a positive relationship towards relationship quality (dependent variable) within the Internet industry? (Table 6.27).

Table 6.27. The relationship between value added services and relationship quality.

R^2= .314	BETA	p-level
Intercept Point		0.000
E-MAIL SERVICE	0.222	0.006
TOLL-FREE SUPPORT	0.287	0.000

An even weaker positive relationship exists between value-added services and relationship quality than reported above. This finding can be viewed as a derivative of the value added service to service quality relationship previously discussed. The premise of this is the causal relationships proven earlier in this section.

Testing the hypothesis around a proposed relationship between Internet satisfaction and respectively service quality, customer satisfaction and relationship quality:

Does Internet satisfaction (independent variable) have a positive relationship towards service quality (dependent variable) within the Internet industry? (Table 6.28).

Table 6.28. The relationship between Internet satisfaction and service quality.

R^2= .259	BETA	p-level
Intercept Point		0.000
COMMUNICATION SATISFACTION	0.309	0.000
SURFING SATISFACTION	0.266	0.000
TRANSACTION SATISFACTION	-0.008	0.840

Internet satisfaction has a positive relationship with service quality. The coefficient of determination is not as high as the relationship between Internet satisfaction and customer satisfaction. (Table 6.33)

Does Internet satisfaction (independent variable) have a positive relationship towards customer satisfaction (dependent variable) within the Internet industry? (Table 6.29).

Table 6.29. The relationship between Internet satisfaction and customer satisfaction.

R^2= .265	BETA	p-level
Intercept Point		0.000
COMMUNICATION SATISFACTION	0.243	0.000
SURFING SATISFACTION	0.337	0.000
TRANSACTION SATISFACTION	-0.008	0.844

Internet satisfaction has a positive relationship with customer satisfaction. The coefficient of determination is not as high as the relationship between Internet satisfaction and relationship quality.

Does Internet satisfaction (independent variable) have a positive relationship towards relationship quality (dependent variable) within the Internet industry? (Table 6.30).

Table 6.30. The relationship between Internet satisfaction and relationship quality.

R^2= .292	BETA	p-level
Intercept Point		0.000
COMMUNICATION SATISFACTION	0.254	0.000
SURFING SATISFACTION	0.365	0.000
TRANSACTION SATISFACTION	-0.024	0.566

Internet satisfaction has a positive relationship with relationship quality. The coefficient of determination is higher than the relationship between Internet satisfaction and respectively service quality and customer satisfaction. The positive relationship between Internet satisfaction and these constructs to a higher and lesser degree again points to the highly interrelated nature of service quality, customer satisfaction and relationship quality. The fact that the strongest relationship exists with relationship quality can mean that Internet satisfaction is viewed by the subscriber as a relationship bond. A low Internet satisfaction can thus be classified as a critical relationship episode.

Testing the relationship between relationship quality and customer retention:

Does relationship quality have a positive relationship to customer retention? (Table 6.31).

Table 6.31. The relationship between relationship quality and customer retention.

R^2= .010	BETA	p-level
Intercept Point		0.000
RELQUAL	-0.044	0.301
RELCONT	-0.017	0.748
SERCONT	0.085	0.124
SERVADD	0.104	0.010
RECOMM	-0.044	0.424

In line with literature findings a low coefficient of determination exists between relationship quality and customer retention R-square = .010 on the individual subscriber level. The relationship is still significant though at $p<0.000$.

The following summary findings can be deduced (Table 6.32).

Table 6.32. Summary of empirical findings.

OBJECTIVE: Testing the reliability and validity of the SERVQUAL instrument for the measurement of service quality in the Internet industry.		
	HYPOTHESIS ACCEPTED:	Condition of acceptance or rejection:
H0: The compound SERVQUAL scale is a reliable measure of service quality within the Internet industry.	H0	Cronbach alpha: .903
H1: The core service dimension of the SERVQUAL scale is not reliable.	H1	Cronbach alpha: .730 Squared Multiple R = 0.294 which is unacceptably low in comparison with the other dimensions.
H1: The tangible dimension of the SERVQUAL scale is not reliable.	H1	Cronbach alpha: .604 Below the acceptable 0.70 level required for commercial applications (Carman, 1990).
H0: The reliability dimension of the SERVQUAL scale is reliable.	H0	Cronbach alpha: .854
H0: The responsiveness dimension of the SERVQUAL scale is reliable.	H0	Cronbach alpha: .867
HO: The assurance dimension of the SERVQUAL scale is reliable.	H0	Cronbach alpha: .902
H0: The empathy dimension of the SERVQUAL scale is reliable.	H0	Cronbach alpha: .909
H1: Reliability is not the most important contributor to service quality within the Internet industry. (Nitecki, 1997)	H1	Reliability = 0.844 (parameter estimate) Assurance = 0.936 (parameter estimate) P<0.000
H0: The compound SERVQUAL scale is valid for the Internet industry.	H0	The confirmatory factor loading (parameter estimate) of all the items are significant and the lowest loading is 0.840 P<0.000 Joreskog GFI = 0.930
H0: The reliability factor is valid.	H0	The confirmatory factor loading (parameter estimate) of all the items are significant and the lowest loading is 0.509 P<0.000

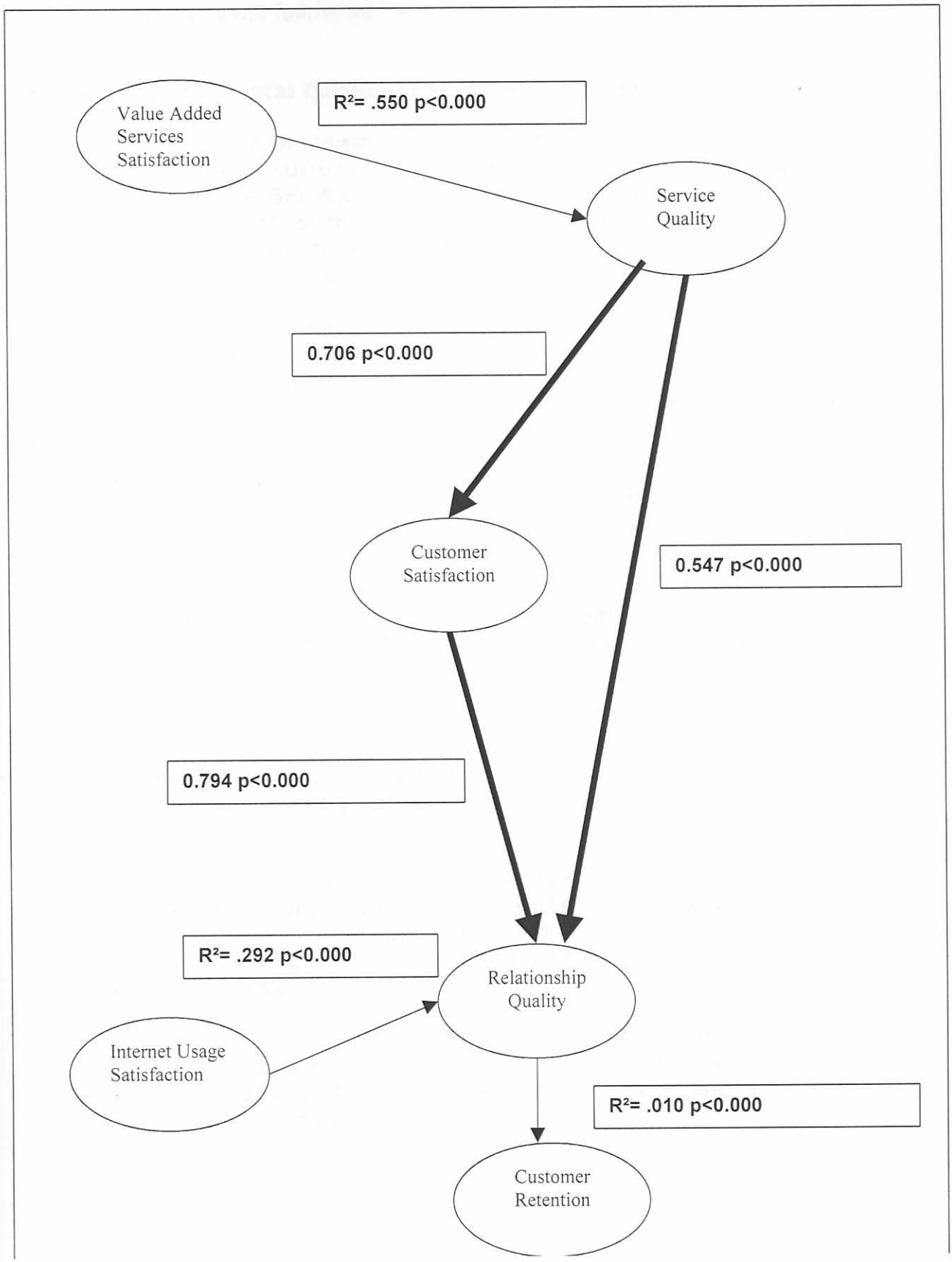
		Joreskog GFI = 0.939
HO: The responsiveness factor is valid.	H0	The confirmatory factor loading (parameter estimate) of all the items are significant and the lowest loading is 0.790 P<0.000
H0: The assurance factor is valid.	H0	The confirmatory factor loading (parameter estimate) of all the items are significant and the lowest loading is 0.697 P<0.000 Joreskog GFI = 0.951
H0: The empathy factor is valid.	H0	The confirmatory factor loading (parameter estimate) of all the items are significant and the lowest loading is 0.665 P<0.000 Joreskog GFI = 0.974
Empirically confirming interrelationships between service quality, customer satisfaction and relationship quality.		
	HYPOTHESIS ACCEPTED:	Condition of acceptance or rejection:
H0: Service quality leads to customer satisfaction.	H0	0.70671 (parameter estimate), p<0.000 Joreskog GFI = 0.934
H0: Customer satisfaction leads to relationship quality	H0	0.79437 (parameter estimate), p<0.000 Joreskog GFI = 0.991
H0: Service quality leads to relationship quality	H0	0.54799 (parameter estimate), p<0.000 Joreskog GFI = 0.940
Testing hypothesis around different flow bond clusters with respect to Internet satisfaction and customer satisfaction.		
	HYPOTHESIS ACCEPTED:	Condition of acceptance or rejection:
H0: There is a significant difference between the different communication flow bond clusters with respect to communication satisfaction in the	H0	Parameter estimate 2.000 P<0.000

Internet industry.		
H0: There is a significant difference between the different surfing flow bond clusters with respect to surfing satisfaction in the Internet industry.	H0	Parameter estimate 2.000 P<0.000
H1: There is not a significant difference between the different transaction flow bond clusters with respect to transaction satisfaction in the Internet industry.	H1	Parameter Estimate 2.000 P<0.165 (not significant)
Testing hypothesis around a proposed relationship between value added services and respectively service quality, customer satisfaction and relationship quality.		
H0: Value added services satisfaction (independent variable) has a positive relationship towards service quality (dependent variable) within the Internet industry.	H0	R^2= .550 (Coefficient of determination) P<0.000
H0: Value added services satisfaction (independent variable) has a positive relationship towards customer satisfaction (dependent variable) within the Internet industry.	H0	R^2= .371 (Coefficient of determination) P<0.002
H0: Value added services satisfaction (independent variable) has a positive relationship towards relationship quality (dependent variable) within the Internet industry.	H0	R^2= .314 (Coefficient of determination) P<0.000
Testing hypothesis around a proposed relationship between Internet satisfaction and respectively service quality, customer satisfaction and relationship quality.		
	HYPOTHESIS ACCEPTED:	Condition of acceptance or rejection:
H0: Internet satisfaction (independent variable) has a positive relationship towards service quality (dependent variable) within the Internet industry.	H0	R^2= .259 (Coefficient of determination) P<0.000
H0: Internet satisfaction (independent variable) has a positive relationship towards customer satisfaction (dependent variable) within the Internet industry.	H0	R^2= .265 (Coefficient of determination) P<0.000
H0: Internet satisfaction (independent variable) has a positive relationship towards relationship	HO	R^2= .292 (Coefficient of determination) P<0.000

quality (dependent variable) within the Internet industry.		
Testing the relationship between relationship quality and customer retention.		
	HYPOTHESIS ACCEPTED:	Condition of acceptance or rejection:
H0: Relationship quality has a positive relationship to customer retention.	H0	R^2= .010 (Coefficient of determination) P<0.000

The key findings can be summarised visually for ease of understanding (Figure 6.10).

Figure 6.10. Visual Summary of key empirical findings



6.3. Practical recommendations

Practical recommendations will be given within the context of five suggested projects to be undertaken by Intekom. Thereafter academic recommendations will follow that is applicable for future research.

6.3.1. Project 1: Total Quality of Service Management.

(1) Research: The organisation must first research the needs and beliefs of its external customers and internal customers (i.e. employees).In this study the SERVQUAL scale has been proved to be a reliable and valid instrument for the measurement of service quality in the Internet industry. Focus groups and employee questionnaires can be used to assess the needs and beliefs of employees.

(2) Empowerment: Everyone in the organisation, from top to bottom, must be given the power to develop and maintain a service culture in his or her daily work. Call centre employees must be empowered to give collateral of some kind, 1-month free access or value added services as component of a service recovery.

(3) Acknowledgement: Management must set the standards of service excellence that its customers (as well as employees) demand. Service level agreements must be negotiated with subscribers and employees.

(4) Communication - The standard must be communicated to everyone in the organisation, so that they are all focusing in the same direction. Service level agreements must be communicated and awareness campaigns designed to communicate it.

(5) Help - The quickest and most effective way to help employees understand and appreciate the importance of service excellence is to train them and reward them. Incentives must be given to employees when service level agreements are exceeded.

The EDGE process is a practical arm of REACH. It consists of four stages: Evaluate, Design, Guide, and encourage Excellence. The service EDGE is an interactive and flexible process geared toward encouraging management and staff to take an active part in creating and maintaining a service culture, both internally and externally.

(1) Evaluate: The first step is to perform an internal and external review of the organisation in order to compare the current service performance with the best practices of others and shortfalls on expectations held by clients.

(2) Design: The gaps are reviewed to determine what has caused them. The current service delivery chain is mapped, service relationships between departments determined, gaps highlighted, and cost-of-service impact analyses performed. Through the workshop approach, employees groups find ways to close the gaps and report to the management for approval. The approved improvements are ranked in order of importance and assembled into a company-wide service implementation plan. Any operational change will be framed within a strategic service vision – a vision to out-think the competition rather than to match them.

(3) Guide: The third step is to put the plan into action. Communication processes are streamlined. Quality teams are empowered. Training is developed and delivered. Performance measures are put in place. The goal is to ensure that a climate of change is felt throughout the organisation.

(4) Encourage Excellence: The integration of service excellence in an organisation is complete when it results in lasting improvements to the business process. Excellence should be fairly rewarded and quality teams should meet regularly. The entire organisation should stay on top and keep up with ever changing customer needs (LOGIC web-site, 1997).

People are always the central theme in quality improvement, while technology gives people the tool to maintain or improve quality.

6.3.2. Project 2: Making employees aware of the 'right things right' grid.

The 'Right Things Right' grid provides an insightful view of quality improvement (Table 6.33). The grid is a simple way to look at the work people do from different angles. The first angle is how a person does the work they do. People either do things right or do things wrong. The second angle has to do with what work people actually do, doing the right things or the wrong things. When combining these two, there are four possibilities:

Table 6.33. The 'Right Things Right' grid.

	Do things right	**Do things wrong**
Do the right things	Add Value	Quality problems
Do the wrong things	Thing's that don't matter to customers or the company	Real waste of time

(LOGIC web-site, 1997.)

(1) Doing the right things right, the only grid that adds value to company and its customers.
(2) Doing the right things wrong, this leads to quality problems.
(3) Doing wrong things wrong, a real waste of time.
(4) Doing wrong things right, things that do not matter to customers, internal or external, but doing a good job for them.

6.3.3. Project 3: Developing a Relationship Marketing Strategy.

Developing a core service around which to build a customer relationship: The core service of the Internet service provider – retailing of bandwidth – should be communicated to all employees within the ISP. Consensus around the core service will enable employees to focus on what is strategically important for the ISP.

Customising the relationship to the individual customer through segmentation, personalisation and customisation:

Segmentation:
Different services should be designed for different challenge/skill profile clusters:
(1) To educate Intekom subscribers in the field that they use the Internet for and by doing this limiting anxiety levels.
(2) To challenge Intekom subscribers to use the Internet in new ways, for new applications and more effectively integrate it into their daily lives.
(3) A history must be kept on what subscribers use the Internet for and how they prefer communication, by phone, e-mail or other.

Value is what customers are worth to the Services Company and they must be categorised according to usage and longevity.

Personalisation:
The company has to communicate with each customer in a way that recognises their specific needs and characteristics and persuade them to respond. A customer needs to be 'recognised', when or where he 'touches' the company, whether it's a phone call to sales, a letter querying an invoice, a faxed complaint to customer services, or a web-site visit.

The Intekom newsletter: The monthly newsletter that goes out to all Intekom subscribers. The newsletter will serve as communication tool for new products for existing subscribers, new value added services as well as loyalty programs such as competitions.

The Intekom home page: The Intekom home page will be customised to lend itself to higher levels of customisation within the relationship context. This will be achieved in the following ways:

(1) Individual customisation: The home page will on a per request basis customise itself around the users skill and challenge levels to provide the optimum mix of education and challenges.
(2) Portal customisation: The current home page will be customised according to certain topical and interest dimensions on a per request basis. This data will be fed back to the on-line administrator or channel manager who will use it for the facilitation of virtual community creation.
(3) One-to-one customisation: Intekom will have resources available within a private portal environment to be of assistance to Intekom subscribers in their on-line experiences. These people will function as Internet guides and will provide the ultimate customisation because of the human interaction component that is more advanced than existing technology packages. People external to Intekom will also be recruited to take part in this program. An example is having a sport-star available for questions within the on-line sporting community on Friday afternoons. The sport-star can then get a percentage of the banner revenue to his on-line Q&A session.

The Intekom call-centre: The implementation of the SIEBEL call centre system will enable functions like previous subscriber interactions and problems as well as behavioural segmentation to be at the fingertips of the call centre consultants. Integration of database components from the home page into the call centre application can create even higher levels of personalisation.

Customisation:
Offering customisable products:
(1) Limited versus unlimited access.
(2) One or more e-mail accounts.
(3) Different configurations of value added services.

With mass customisation, companies create standardised modules that can be produced quickly and cost-effectively in quantity. When a firm finds a customer and assesses its needs, it assembles the modules into a custom configuration. To the customer, this product/service bundle has the look and feel of a customised package. In fact, the package is made of standardised modules quickly assembled into a targeted bundle.

Augmenting the core service with extra benefits:
Initiate new products to be developed for existing subscribers.

Examples includes:
(1) Secure e-mail
(2) Personalised search-engines
(3) Virus checking server
Specific attention must be given to:
(1) E-mail services.

(2) The Starter Kit.
(3) Toll-free support.

These services have a strong relation with service quality as proven in the study.

The philosophy behind value added services are to sell what the customer wants not what the service provider already has. A reliable, Internet experience is just a ticket to enter the competitive arena. Over time, customers will want their ISP to make their lives simpler and more convenient and to bring to them new ideas and approaches that match their own beliefs and interests. It's not about what the average customer wants, or what a majority of customers want...this is what each customer wants.

Pricing services to encourage customer loyalty:

(1) The rewards program: rewarding a customer's purchase behaviour with merchandise unrelated to the brand such as giving frequent flyer miles in return for time spent on the Web.
(2) The rebate program–'the more you purchase from me the better price I will extend back to you.'
(3) Negotiating with Telkom to 'sponsor' accounts where the subscriber spends more than a specific time per month on the Internet.

Marketing to employees so that the in turn will perform well for customers: Employees must be trained on customer management and professional telephone communication.

Building trust:
(1) Communication must be open, honest, and frequent:
(2) Call subscribers on their birthday or send e-mail.
(3) Communicate pro-actively if services are not going to be available or configurations change.

Guaranteeing the service:

Service guarantees are another means to build trust. Dissatisfied customers can invoke the guarantee and receive compensation for the burden they have endured. When executed well, service guarantees can symbolise a company's commitment to fair play with customers and facilitate competitive differentiation. Guarantees also force the organisation to improve service to avoid the cost and embarrassment of frequent pay-outs.

A higher standard of conduct:
Companies seeking to build genuine relationships with customers must be willing to operate with a higher standard of conduct than just legality.

6.3.4. Project 4: Minimise fail-points and implement service recoveries.

The following fail-points should receive urgent attention:

(1) Connection: Actions should be taken to allow for higher availability and reliability of a Internet connection.
(2) Mail Server: The mail server is frequently not available. Actions should be taken for a more reliable mail server.

The following recoveries should receive urgent attention:

(1) Slow on signing a new subscriber up: Service level agreements should be set for signing subscribers up for Internet services. If service level is not attained reasons need to be communicated to the subscriber.
(2) User settings: User settings must be accurately communicated to users. Pro-active communication is needed if setting should be changed.
(3) Availability of a connection: When a connection is not available a reason must be given to the subscriber pro-actively.
(4) Mail Server: Mail server problems must be communicated to subscribers.
(5) DNS server: DNS server problems must be communicated to subscribers.
(6) Security: When security problems occur it must be communicated pro-actively.
(7) Pro-active information dissemination: Information must be disseminated pro-actively if a change in service is going to occur.

6.3.5. Project 5: Customer retention program

(1) A means of measuring why customers leave. Intekom should implement a structured system for 'exit' interviews. A questionnaire should be compiled and responses obtained as part of the service cancellation process. Monthly reporting on these finding will assist in picking up trends and competitors strategies.
(2) A planned effort to prevent customers from leaving once they express a desire to do so. Front line staff must get incentives for 'saving' customers that want to leave. The means must also be given to fron line staff to guarantee better service or upgrade customers to more valuable packages in order to retain customers.

6.4. Academic recommendations

(1) A more reliable measure for core service measurement in the Internet industry must be developed.

(2) The study should be duplicated in a similar industry, for example the cellular industry, where the link between relationship quality and customer retention can be tested with higher churn figures in relation to the sample.

(3) Research should be done to determine the effect of price changes on the proposed model.

(4) Potential users of SERVQUAL should be cautious. The reliability of the tangible construct is low. Although this is also a problem with the original instrument, it cannot be ignored. The whole issue of tangibles in an IS environment probably needs further investigation. It may be appropriate to split tangibles into two dimensions: appearance and hardware/software. Because hardware and software can have a significant impact, a measure of IS service quality possibly needs further questions to tap these dimensions (Pitt *et al.*, 1997).

(5) The customer service life cycle, a variation on the customer resource life cycle , breaks down the service relationship with a customer into four major phases: requirements, acquisitions, stewardship, and retirement. It is highly likely users' expectations differ among these phases. Empathy might be the major need during requirements and reliability during stewardship. Thus, examining service quality by the customer service life cycle phase is an opportunity for future research (Pitt, Watson and Kavan, 1997).

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Appendix A: Detailed Statistics Related to Findings

Table A1.1 Noncentrality Fit Indices of: Confirmatory Factor analysis of SERVQUAL (Refer Table 6.11)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.114	0.148	0.188
Steiger-Lind RMSEA Index	0.238	0.272	0.306
McDonald Noncentrality Index	0.910	0.928	0.944
Population Gamma Index	0.913	0.931	0.945
Adjusted Population Gamma Index	0.569	0.655	0.729

Table A1.2 Single Sample Fit Indices of: Confirmatory Factor analysis of SERVQUAL (Refer Table 6.11)

	Value
Joreskog GFI	0.930
Joreskog AGFI	0.651
Akaike Information Criterion	0.152
Bentler-Bonett Normed Fit Index	0.959
Bentler-Bonett Non-Normed Fit Index	0.881
Bentler Comparative Fit Index	0.960

Table A1.3 Basic Summary Statistics of: Confirmatory Factor analysis of SERVQUAL (Refer Table 6.11)

	Value
Discrepancy Function	0.139
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	2.000
p-level	0.000
RMS Standardized Residual	0.029

Table A2.1 Noncentrality Fit Indices of: Confirmatory Factor Analysis for the reliability dimension (Refer Table 6.12)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.148	0.187	0.232
Steiger-Lind RMSEA Index	0.128	0.144	0.160
McDonald Noncentrality Index	0.890	0.910	0.928
Population Gamma Index	0.928	0.941	0.952
Adjusted Population Gamma Index	0.832	0.862	0.890

Table A2.2 Single Sample Fit Indices of: Confirmatory Factor Analysis for the reliability dimension (Refer Table 6.12)

	Value
Joreskog GFI	0.939
Joreskog AGFI	0.857
Akaike Information Criterion	0.210
Bentler-Bonett Normed Fit Index	0.924
Bentler-Bonett Non-Normed Fit Index	0.878
Bentler Comparative Fit Index	0.927

Table A2.3 Basic Summary Statistics of: Confirmatory Factor Analysis for the reliability dimension (Refer Table 6.12)

	Value
Discrepancy Function	0.189
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	9.000
p-level	0.000
RMS Standardized Residual	0.054

Table A3.1 Basic Summary Statistics of: Confirmatory Factor Analysis for the responsiveness dimension (Refer Table 6.13)

	Value
Discrepancy Function	0.000
Maximum Residual Cosine	0.969
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	0.000
p-level	
RMS Standardized Residual	0.000

Table A4.1 Noncentrality Fit Indices of: Confirmatory Factor Analysis for the assurance dimension (Refer Table 6.14)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.111	0.145	0.185
Steiger-Lind RMSEA Index	0.111	0.127	0.143
McDonald Noncentrality Index	0.911	0.929	0.945
Population Gamma Index	0.941	0.953	0.964
Adjusted Population Gamma Index	0.864	0.892	0.916

Table A4.2 Single Sample Fit Indices of: Confirmatory Factor Analysis for the assurance dimension (Refer Table 6.14)

	Value
Joreskog GFI	0.951
Joreskog AGFI	0.886
Akaike Information Criterion	0.169
Bentler-Bonett Normed Fit Index	0.956
Bentler-Bonett Non-Normed Fit Index	0.930
Bentler Comparative Fit Index	0.958

Table A4.3 Basic Summary Statistics of: Confirmatory Factor Analysis for the assurance dimension (Refer Table 6.14)

	Value
Discrepancy Function	0.148
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	9.000
p-level	0.000
RMS Standardized Residual	0.032

Table A5.1 Noncentrality Fit Indices of: Confirmatory Factor Analysis for the empathy dimension (Refer Table 6.15)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.048	0.071	0.101
Steiger-Lind RMSEA Index	0.073	0.089	0.105
McDonald Noncentrality Index	0.950	0.964	0.976
Population Gamma Index	0.967	0.976	0.984
Adjusted Population Gamma Index	0.923	0.945	0.963

Table A5.2 Single Sample Fit Indices of: Confirmatory Factor Analysis for the empathy dimension (Refer Table 6.15)

	Value
Joreskog GFI	0.974
Joreskog AGFI	0.940
Akaike Information Criterion	0.098
Bentler-Bonett Normed Fit Index	0.979
Bentler-Bonett Non-Normed Fit Index	0.968
Bentler Comparative Fit Index	0.981

Table A5.3 Basic Summary Statistics of: Confirmatory Factor Analysis for the empathy dimension (Refer Table 6.15)

	Value
Discrepancy Function	0.078
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	9.000
p-level	0.000
RMS Standardized Residual	0.022

Table A6. Structural Equation – Service Quality leads to Customer Satisfaction.

SEPATH Syntax	Parameter Estimate	Probability Level
(Customer Sat)-->[INTEKOMP]		
(DELTA1)-->[INTEKOMP]		
(DELTA1)-2-(DELTA1)	0.646	0.000
(SQ)-->[RELP]		
(SQ)-3->[RESPO]	1.053	0.000
(SQ)-4->[ASSURP]	1.116	0.000
(SQ)-5->[EMPAP]	1.005	0.000
(EPSILON1)-->[RELP]		
(EPSILON2)-->[RESPO]		
(EPSILON3)-->[ASSURP]		
(EPSILON4)-->[EMPAP]		
(EPSILON1)-6-(EPSILON1)	0.292	0.000
(EPSILON2)-7-(EPSILON2)	0.214	0.000
(EPSILON3)-8-(EPSILON3)	0.116	0.000
(EPSILON4)-9-(EPSILON4)	0.283	0.000
(ZETA1)-->(SQ)		
(ZETA1)-10-(ZETA1)	0.707	0.000
(SQ) -11-> (Customer Sat)	**0.706**	**0.000**

Table A6.1 Noncentrality Fit Indices of: Structural Equation – Service Quality leads to Customer Satisfaction (Refer Table A6)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.133	0.170	0.213
Steiger-Lind RMSEA Index	0.163	0.184	0.206
McDonald Noncentrality Index	0.898	0.918	0.935

Population Gamma Index	0.921	0.936	0.949
Adjusted Population Gamma Index	0.763	0.808	0.847

Table A6.2 Single Sample Fit Indices of: Structural Equation – Service Quality leads to Customer Satisfaction (Refer Table A6)

	Value
Joreskog GFI	0.934
Joreskog AGFI	0.803
Akaike Information Criterion	0.184
Bentler-Bonett Normed Fit Index	0.957
Bentler-Bonett Non-Normed Fit Index	0.916
Bentler Comparative Fit Index	0.958

Table A6.3 Basic Summary Statistics of: Structural Equation – Service Quality leads to Customer Satisfaction (Refer Table A6)

	Value
Discrepancy Function	0.167
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	5.000
p-level	0.000
RMS Standardized Residual	0.029

Table A7. Structural Equation: Customer Satisfaction leads to relationship quality.

SEPATH Syntax	Parameter Estimate	Probability Level
(Cussat)-1->[INTEKOMP]	0.889	0.000
(DELTA1)-->[INTEKOMP]		
(DELTA1)-2-(DELTA1)	0.209	0.000
(Relq)-->[RELQUAL]		
(Relq)-3->[RELCONT]	1.091	0.000
(Relq)-4->[SERVADD]	0.975	0.000
(Relq)-5->[RECOMM]	1.160	0.000
(EPSILON1)-->[RELQUAL]		
(EPSILON2)-->[RELCONT]		
(EPSILON3)-->[SERVADD]		
(EPSILON4)-->[RECOMM]		
(EPSILON1)-6-(EPSILON1)	0.368	0.000
(EPSILON2)-7-(EPSILON2)	0.248	0.000
(EPSILON3)-8-(EPSILON3)	0.400	0.000
(EPSILON4)-9-(EPSILON4)	0.150	0.000
(ZETA1)-->(Relq)		

(ZETA1)-10-(ZETA1)	0.000	
(Cussat)-11->(Relq)	**0.794**	**0.000**

Table A7.1 Noncentrality Fit Indices of: Structural Equation – Customer Satisfaction leads to relationship quality (Refer Table A7)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.000	0.012	0.037
Steiger-Lind RMSEA Index	0.010	0.049	0.087
McDonald Noncentrality Index	0.981	0.993	0.999
Population Gamma Index	0.985	0.995	0.999
Adjusted Population Gamma Index	0.955	0.985	0.999

Table A7.2 Single Sample Fit Indices of: Structural Equation – Customer Satisfaction leads to relationship quality (Refer Table A7)

	Value
Joreskog GFI	0.991
Joreskog AGFI	0.974
Akaike Information Criterion	0.057
Bentler-Bonett Normed Fit Index	0.994
Bentler-Bonett Non-Normed Fit Index	0.993
Bentler Comparative Fit Index	0.996

Table A7.3 Basic Summary Statistics of: Structural Equation – Customer Satisfaction leads to relationship quality (Refer Table A7)

	Value
Discrepancy Function	0.021
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	5.000
p-level	0.040
RMS Standardized Residual	0.010

Table A8. Structural Equation: service quality leads to relationship quality.

SEPATH Syntax	Parameter Estimate	Probability Level
(SERVQUAL)-1->[RELP]	0.851	0.000
(SERVQUAL)-2->[RESPO]	0.902	0.000
(SERVQUAL)-3->[ASSURP]	0.938	0.000
(SERVQUAL)-4->[EMPAP]	0.836	0.000
(DELTA1)-->[RELP]		
(DELTA2)-->[RESPO]		

(DELTA3)-->[ASSURP]		
(DELTA4)-->[EMPAP]		
(DELTA1)-5-(DELTA1)	0.275	0.000
(DELTA2)-6-(DELTA2)	0.185	0.000
(DELTA3)-7-(DELTA3)	0.119	0.000
(DELTA4)-8-(DELTA4)	0.300	0.000
(RELQUAL)-->[RELQUAL]		
(RELQUAL)-9->[RELCONT]	1.071	0.000
(RELQUAL)-10->[SERVADD]	0.951	0.000
(RELQUAL)-11->[RECOMM]	1.104	0.000
(EPSILON1)-->[RELQUAL]		
(EPSILON2)-->[RELCONT]		
(EPSILON3)-->[SERVADD]		
(EPSILON4)-->[RECOMM]		
(EPSILON1)-12-(EPSILON1)	0.334	0.000
(EPSILON2)-13-(EPSILON2)	0.236	0.000
(EPSILON3)-14-(EPSILON3)	0.397	0.000
(EPSILON4)-15-(EPSILON4)	0.187	0.000
(ZETA1)-->(RELQUAL)		
(ZETA1)-16-(ZETA1)	0.365	0.000
(SERVQUAL)-17->(RELQUAL)	**0.547**	**0.000**

Table A8.1 Noncentrality Fit Indices of: Structural Equation – service quality leads to relationship quality (Refer Table A8)

	Lower 90% Confidence Bound	Point Estimate	Upper 90% Confidence Bound
Population Noncentrality Parameter	0.157	0.218	0.294
Steiger-Lind RMSEA Index	0.091	0.107	0.124
McDonald Noncentrality Index	0.863	0.896	0.924
Population Gamma Index	0.931	0.948	0.962
Adjusted Population Gamma Index	0.870	0.901	0.928

Table A8.2 Single Sample Fit Indices of: Structural Equation – service quality leads to relationship quality (Refer Table A8)

	Value
Joreskog GFI	0.940
Joreskog AGFI	0.887
Akaike Information Criterion	0.310
Bentler-Bonett Normed Fit Index	0.963
Bentler-Bonett Non-Normed Fit Index	0.953
Bentler Comparative Fit Index	0.968

Table A8.3 Basic Summary Statistics of: Structural Equation – service quality leads to relationship quality (Refer Table A8)

	Value
Discrepancy Function	0.248
Maximum Residual Cosine	0.000
Maximum Absolute Gradient	0.000
ICSF Criterion	0.000
ICS Criterion	0.000
Degrees of Freedom	19.000
p-level	0.000
RMS Standardised Residual	0.042

Appendix B: Paper delivered at Nett Effects: The Worldwide Internet Conference and Exhibition – February 1999 – London, UK

The Internet and the changing role of market research

by Peet Venter and Meyer Prinsloo

The paper addresses the important role that the Internet plays in a changing market research environment. It uses case histories as a backdrop to analysing the problems and advantages associated with Internet based research. It also identifies possible means of overcoming problems and utilising advantages.

1. Introduction

Internet based research is very experimental in nature due to the rapid development of the Internet. Because of this rapid growth, theory has been slow to catch up. As Harris (1997) points out, marketing activities on the Internet can largely be regarded as 'practice without theory'. This paper will attempt to propose some practical solutions for Internet based research. It represents the view of the commercial research buyer/ user, and has both a South African and global focus.

2. The changing nature of marketing

Probably the single most significant change affecting the nature of marketing has been changes in information technology, with the Internet at the forefront as a catalyst for change. Some of the significant areas of change where the Internet plays a role are discussed below.

- The traditional marketing paradigm of interaction between a physical seller and a physical buyer is no longer valid. This enables the elimination of intermediaries like wholesalers and retailers. As Brännback (1997) points out, the focus in a virtual market is on information about the product rather than the product itself or geographical positioning.
- Customer data abounds and marketers are now able to know more about their customers than ever before.
- Consumers are empowered and able to access or find information on their own, and to make more informed choices. This puts the consumer in a stronger bargaining position relative to the seller.
- It reduces the barriers of entry to the market dramatically. For instance, where the investment in trading space and the purchasing of physical product have traditionally been barriers to entry, these have been eliminated. The result is a proliferation in competition and choice

How are marketers, and specifically market researchers, responding to these challenges?

3. The Internet and the changing role of market research

The dominant theme emerging from marketing in the knowledge era is relationship marketing. The utopia of relationship marketing is a personal relationship with every single customer. The customer database is a primary tool in accomplishing this. It rests on the principle that proactive identification and fulfilling of individual customer needs will build a relationship and raise the "lifetime value" of customers. Marketing on the Internet is regarded as a particular opportunity in this regard (Carnelley 1997).

In light of the above, it is hardly surprising that the role of market research in the organisation is seen to be changing too. Also, it would seem that traditional market research, which relies on sampling and survey data to represent a population may not always be the ideal model for gathering information in a relationship marketing paradigm. Some of the changes in market research are as follows (Schmidt 1993; Seggev 1995; Van Vuuren & Maree-Koen 1997):

- market researchers are more and more required to provide pragmatic and action oriented business solutions;
- a professional market research service is required, using better trained and more business oriented staff;
- market researchers are required to come up with more innovative research approaches; and
- market researchers are increasingly expected to justify their existence in 'return on market research investment' terms.

In short, market research is more and more seen as a professional service and less as mere execution of the market research process. This paper will analyse the role that the Internet can play in this changing role of market research. However, as a starting point, some definitions have to be clarified. That will be followed by three case histories of Internet based research projects as a backdrop to the discussion.

4. Defining Internet based research

It appears as if there are two different definitions at work in the arena of online research. Firstly, there is what can be described as Internet

research. This refers to instances where the online population is used as a sampling frame. Quite often the results from these surveys are then used to make inferences about the nature of the online population, or even to the general population. This approach has deservedly drawn criticism, since no single sampling frame for Internet users exist. In addition, the Internet population is skewed towards certain demographic groups.

The focus of this paper is on Internet based research, as the authors refer to it. This refers to the methodology where the Internet is used as a research vehicle.

There are essentially three Internet based research models. These are briefly discussed below.

i. A World Wide Web based model, where a questionnaire is hosted on a web site/ server. It allows fairly complex interactivity, help facilities and skip procedures. Respondents are lured to the site by e-mail, by focused media (such as snail mail or telephone) or by unfocused media such as radio or television (which does not allow probability sampling).

Advantages:

- High level of interactivity.
- Control can be more efficient since it is possible to integrate control procedures with the server architecture. The server can for example verify certain user characteristics or identification codes interactively while the respondent logs onto the questionnaire.
- The questionnaire can be adjusted on the spur of the moment.
- The session variables of the respondents completion of the questionnaire can be monitored very closely, for instance the time spent on a specific question.
- Data is immediately available, for example for pilot analysis.
- Respondents do not need an e-mail box (for instance universities and Internet cafés).

Disadvantages:

- Respondent pays for the telephone connection (local charges in UK and South Africa).

- Respondents need an Internet Browser.
- Time spent to complete the questionnaire is reliant on the quality of the connection to the Internet.

ii. An e-mail based model, where the full questionnaire is e-mailed to the respondent. This model has varying levels of interactivity – for example from mailing a Microsoft word document to mailing a fully interactive executable file.

Advantages

- Respondent only pays for the connection time necessary to download the e-mail message.
- Respondent needs only access to e-mail.

Disadvantages:

- Control is restricted to what can be included in the e-mail message.
- Questionnaire can not be altered or deleted on the mail server.
- Data is only available for analysis after mail has been sent back.
- The response mechanism is relatively technically complex.

iii. A hybrid model, which is a combination of the above mentioned models, so that the respondent chooses which model to support. For instance, inviting potential respondents to either complete the questionnaire on a web page or to reply to the e-mail questionnaire.

5. Internet based research case histories

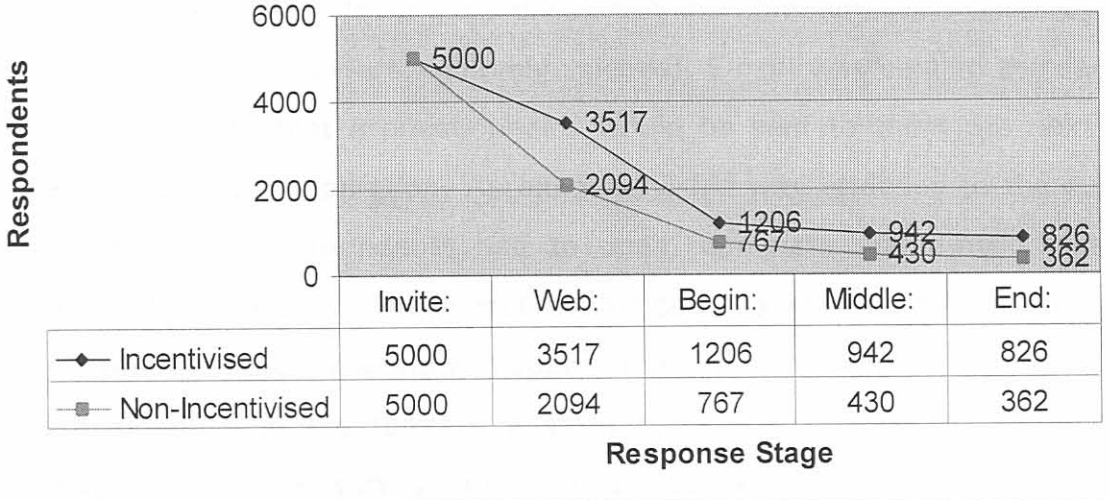
Case 1

An Internet Service provider performed a customer satisfaction, retention and segmentation study during the period September to November 1998. Two probability samples of 5 000 e-mail addresses each where drawn from the Internet Service Provider database. An e-mail invite to a web-based questionnaire was mailed out on the first of October 1998 at 10:00. One sample was promised 100 double movie tickets for the first 100 completed questionnaires submitted and mouse-pads for the next 200 responses. No incentive was offered to the other sample.

In this study the Internet Service Provider database information was used to validate respondents as subscribers and make sure they complete only one questionnaire. Postal codes were used to weigh the sample back into the subscriber population.

The response patterns over time were almost identical, with similar drop-off rates occurring for both samples. However, the response volume for the incentive group was 9% higher than for the non-incentivised group (see figure 1). From the 5000 invites, approximately 70% of the incentivised group followed the link to the web page, compared to 42% of the non-incentivised group. Of the Web page visitors, 34% and 37% respectively started with the questionnaire. Of those starting, 78% and 56% respectively proceeded to the middle of the questionnaire, and of these 88% and 84% respectivly submitted a questionnaire.

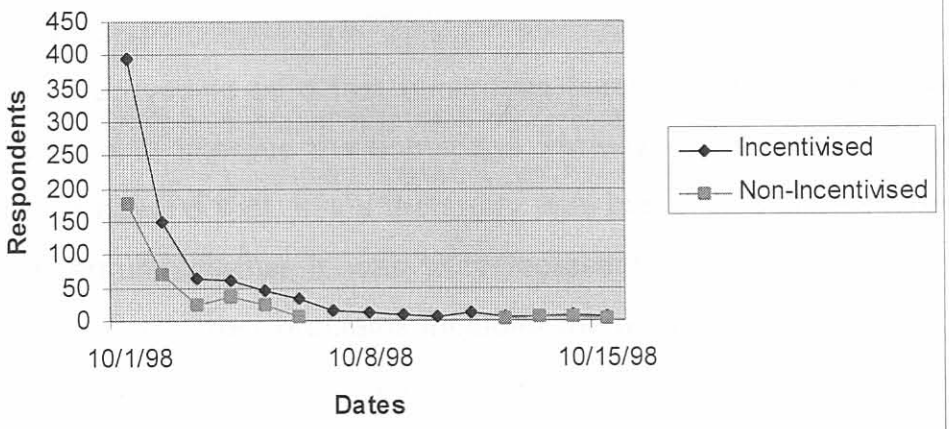
Figure 1: Sample Attrition



	Invite:	Web:	Begin:	Middle:	End:
Incentivised	5000	3517	1206	942	826
Non-Incentivised	5000	2094	767	430	362

In addition, 66% of responses were generated within the first 48 hours after launch of the questionnaire for both samples (see figure 2). Detailed records were kept as to what time was spent on the questionnaire, and when questionnaires were completed. Most questionnaires were submitted after office hours. It is interesting to note that the incentivised sample took less time to complete the questionnaire than the non-incentivised sample.

Figure 2: Response by Date



Case 2

Although strictly not Internet based, the following example does serve to highlight some important points. Telkom conducted an internal customer satisfaction survey for a large division in the company. 980 users of this division's services were randomly selected. E-mail was sent to the sample to warn them that a questionnaire would be sent to them the next day and to solicit co-operation. An executable file was attached to the survey e-mail, which respondents had to open, complete and e-mail back by automated process. The e-mail announced the incentives, and provided instructions to completing and submitting questionnaires.

An incentive in the form of a small prize was offered to the first 30 respondents. The survey drew a response rate of 20.1%, compared to

14% the previous year (no incentive). The completion time of the project from questionnaire launch to data analysis was 10 working days.

Case 3

Intekom launched an Internet based questionnaire to evaluate the their home site. The questionnaire was launched on 25 September 1998 and removed end of day 6 October 1998 (12 days). Small incentives were offered to 30 randomly drawn respondents. A banner on the home page was used to lure on-line users into the questionnaire. Out of 33678 page hits in this period, 1127 clicked through to the banner (3.3%). Of these, 370 (33% of click through, 1.1% of page hits) submitted completed questionnaires.

The method proved to be a fast qualitative feedback method that was in this case used to improve the homepage. However, the results were not extrapolated beyond that, since the study was based on self-selection and it was uncertain whether it was truly representative of the home page visitor population. Other problems included the high drop-off rate, and the fact that raw data was captured in text labels and not numeric labels. This practice complicated the data analysis and wasted time.

In the case of the Intekom home page regular users can request to customise the home page according to their personal needs/interests. It is possible to obtain more meaningful results by drawing a sample out of the customisation database and offer the questionnaire only to a probability sample through a banner link. This sample can then be extrapolated to cover the customised users, the type of users that seek for relationship type interaction from the content/service provider.

6. Addressing the problems of Internet based research

The most often cited problem of Internet research is the lack of a sampling frame and representation. However, the organisation's market segmentation should drive the decision here. In other words, is the segment targeted by the market research ready for Internet based research? Table 1 demonstrates that South African business decision-makers (especially those in large companies) seem to be ready for Internet

based research. Perhaps the most interesting statistic is the fact that 70% of business decision-makers in large organisations prefer e-mail to other means of communication. Another application being implemented by Telkom, is the market research evaluation network, where both internal clients and external vendors are targeted by e-mail to provide structured feedback on research projects.

Table 1: Internet usage in South African business market segments

	Home office	Small business	Medium business	Large business
Internet usage	7%	38%	39%	60%
Use Internet at work	-	13%	13%	21%
Prefer e-mail	-	44%	45%	70%
Use e-mail daily	-	16%	17%	44%
Use Internet at home	-	13%	27%	33%

Source: BMI-T (1997), SA Business Survey (1997)

Internet users are notoriously jealous of their privacy, and can react extremely negatively to unsolicited contact. This may mean that the organisation would either have to obtain commercial, vetted e-mail address lists, or would have to obtain this consent. In South Africa, list brokers are only now getting into the business of obtaining e-mail addresses in addition to other contact details for commercial databases. Panels for specific market segments may be another way of solving this problem. In all cases, it is important to ensure that research initiatives conform to legislation and research codes of conduct.

Response rates for online research is typically lower than for face-to-face or for telephonic research, and is more in line with those for mail surveys. The obvious solution is to use incentives, since it increases responses significantly. Incentives seem to play a particular role in luring respondents to the questionnaire, and again in getting respondents to persevere to the end of the questionnaire, as Case 1 has shown. However, using incentives also create problems. Respondents may for instance try to submit more than one response. Also, since access may be shared, the actual respondent may not be the targeted respondent. Currently, ISPs and companies hosting mail servers are the only entities in a position to

control of these problems, since they control all e-mail addresses and aliases from their databases.

Technical problems may arise. Incompatibilities between various software versions or systems may create complications. Hays (1998) warns that technical problems that may arise when sending questionnaires to networked environments, for instance due to security measures. In addition, technical problems with completing and submitting the questionnaire may arise. Experience has taught that, on the design side, different versions of browsers and e-mail packages should be taken into account. Thorough pilot testing and online 'torture testing' is required to make sure that potential technical problems are solved before questionnaire launch. In addition, clear instructions should be provided to respondents at every opportunity.

Another concern is the high attrition rate of responses. Between steps in the response process, and even during questionnaire completion, sample attrition is high (see figure 1 and 2). Even the number of drop-offs in the beginning and middle of samples is a concern. This necessitates the quest innovative means of ensuring respondent attention and click-through to next steps in the process.

7. Advantages of Internet based research

It is a very flexible research tool, with the ability to build random exposure to different questionnaires, automatic routing, visual aids and other stimuli into the questionnaire. This is particularly relevant since research is evolving into issues of complex design such as discrete choice modelling and conjoint value analysis. This complicates the data collection process. For instance, a discrete choice methodology was used in a recent demand research survey In South Africa. With 6 of the 11 official languages being used, the methodology (using face-to-face interviews) dictated a sample of 1200, exposed to 90 different versions of the questionnaire. This would have been much easier to handle electronically.

It is a lot quicker than conventional methods, since it eliminates the "fieldwork bottleneck" to a large degree. For example, experience has

shown that the bulk of respondents to e-mail surveys respond within 48 hours of being invited to respond to the questionnaire, while a typical research project can be completed within 10 working days. This means that much more time can be spent on planning the survey properly and analysing the data and turning it into knowledge.

Fieldwork in on-line research is much less costly than other methods. For example, in South Africa, a telephone interview can cost anything between $10 and $30 (including data processing), depending on the questionnaire size. Online, this variable cost virtually disappears. In fact, dial-up users actually bear the cost of the response!

A great advantage is the fact that interviewer error, bias and data capturing errors can be eliminated to a large degree. In South Africa this is not a trivial issue, since crime problems are having the effect of households refusing to co-operate with interviewers, having inaccessible properties and unlisted telephone numbers. This creates quality control problems and raises the probability of interviewer error.

Feedback is immediate. Pilot testing can be completed in a very short time frame. In addition, the database of responses can be updated as completed questionnaires are returned, and analysed whenever top line results are required. In fact, judging from case histories, good top line results may be drawn about 48 hours from questionnaire launch.

It is a very convenient research tool for the respondent. As the cases have shown, respondents complete questionnaires at times that no sane interviewer would contact them telephonically or in person. In addition it removes all geographical boundaries and international time differences.

In summary, table 2 presents a summary of advantages of various research data collection tools.

Table 2 Comparison of various research methodologies

Attribute:	Mail	Telephone	Face to face	Internet
Turnaround time	>3 months	6-8 weeks	8-12 weeks	10-14 days
Convenient time	Yes	No	No	Yes

Flexibility	Limited	Limited	High – visual and verbal	High – visual and verbal
Response rate	5-10%	33% hit rate, 90% response rate	Unknown hit rate, 85% response rate	10-20%
Approximate variable cost per response	$25-$50	$10-$30	$30-$50	0
Population	Mail address owners	Telephone users	Geographical restrictions	Internet users

8. Conclusions and recommendations

One of the causes of criticism of Internet research seems to be a result of organisations either trying to reap the benefits of Internet based research prematurely or simply trying to 'get on the bandwagon'. It has to be stressed that Internet research may in fact require a considerable 'ramp-up' in terms of preparation before the benefits can be reaped.

Internet based research should be used subject to the rigors of the research process. In other words, the research process should drive the decision whether Internet based research (compared to the advantages and disadvantages of other media) is a proper medium to use, and not vice versa.

While experimenting with Internet based research, it may be a good idea to validate findings by running parallel control groups outside of the Internet using conventional research media. That will give an indication whether findings from the Internet based sample can be extrapolated.

In instances where the full sample drawn can not be reached via Internet based research, hybrid survey methods like telephone and Internet may present a practical solution to make a survey more affordable and comprehensive.

It is suggested that all questionnaires should contain standard demographic/ corpographic or behavioural questions that can be linked back to the organisation's market segments. This will assist in validating the survey data with known population figures.

Care should be taken to apply the right tool to the right kind of research. For instance, Web site guest books, Web boards and newsgroups can offer quick, valuable qualitative market intelligence but cannot be 'sold' as focus groups (Harris 1997).

Eliminating the variable cost of data collection combined with the ease of administering large samples create the danger that the online population may become over-researched, creating further attrition in response rates. Therefore, sampling plays a vital role even in Internet based research. In addition, certain guarantees could be made to panels or market segments that they will only be contacted by the organisation in question a maximum of say 4 times a year.

In Internet based research, design is a critical issue. Case histories have shown that design has to take place with the data processing in mind. In addition, design has to facilitate the flow of the questionnaire, and care needs to be taken to provide ample instructions. It is useful to give the respondent an indication of progress with the questionnaire. Graphics and open questions should be used sparingly to facilitate speed.

In conclusion it has to be said that Internet based research is an ideal tool to support the changing role of market research, provided that it is done responsibly. Not only is it able to deliver market research results timely, but it also enables more focus on planning the research and analysing results than on execution of the process. In this way, it enables market research to add more value to the business.

9. Future pointers

Research on the Internet is remarkably easy to conduct, with software providing a lot of the required functionality. The temptation may justifiably exist for organisations to take online research in-house. In addition, organisations that are not researchers (such as ISPs) may start to encroach on the terrain of the market research vendor. What is the effect of this going to be on the industry?

When and how will the flexibility of Computer Aided Personal Interviewing (CAPI) and Computer Aided Telephone Interviewing (CATI) tools be

combined with Internet based research tools to get the "best of both worlds"?

Tools already exist to process qualitative questions by means of advanced content analysis (often requiring analyst intervention to complete). This may represent a significant opportunity to conduct automated qualitative research via the Internet.

Currently ISPs have the best contact data to reach the Internet user. The search for a single sampling frame may require the co-operation of all ISPs, commercial list brokers and market research vendors.

From the above discussion it is clear that the Internet provides an exciting additional tool that can provide organisations with relatively cheap data on fast turnaround times. However, organisations that want to use it should not be seduced by the 'smoke and mirrors' of generating sheer numbers very quickly, but should utilise the Internet in enhancing their long term research strategy. In this way, the organisation will be able to obtain the benefits of Internet research, while retaining the value of conventional research processes. What can we as researchers do?

- Experiment and document, help build out the theory of Internet based research.
- Never substitute quality for quantity. Just because high numbers of responses can be generated is no reason to do it.
- Use the Internet as a convenient and cost effective way to survey execution in conjunction with conventional methods. The Internet widens the options that may be offered to potential respondents.
- Select the sample frame independently from the survey method used wherever possible. This is a problem not restricted to Internet based research, for instance using telephone directories to select samples representing the general population.

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Appendix C: Paper delivered at the 21st SAMRA CONVENTION – September 1999 – Sun City, SA

The role of the Internet in market research: time to move forward?

by Peet Venter and Meyer Prinsloo

The use of the Internet in market research draws mixed reactions from various research role players. On the one hand, some regard the Internet as a solution for access to cheap and quick mass market research. Others regard the Internet as a market research tool still in a stage of infancy. While both groups have valid arguments to support their cases, the authors argue that it is time for the market research industry to move forward constructively in implementing Internet-based research

1. Introduction

The use of the Internet in conducting market research is typically one that draws mixed reactions from various research role players. On the one hand, some regard the Internet as a solution for access to cheap and fast mass market research. Others regard the Internet as a market research tool still in a stage of infancy, and are reluctant to utilise it in market research. Some of these divergent views are highlighted in table 1. Both groups have compelling arguments to support their cases, but the paper argues the importance of moving forward with the constructive implementation of Internet-based research.

The negative…	The positive…
'...the problem with the Internet continues to be that it cannot deliver a representative sample of any population' (John O'Brien, BMRB International)	*'...the accuracy of our forecasts* [using Internet based research] *surprised many colleagues in the survey research community...' (Humphrey Taylor and George Terhanian, Louis Harris Associates)*
' ...it's a fairly useless medium for general purpose surveys.' (Prof Martin Collins, City University Business School)	*'Good, fast, cheap. Now you can pick all three' (Dick McCullough, MACRO Consulting Inc.)*

Sources: Kavanagh (1998), McCullough (1998), Taylor and Terhanian (1999)

In the meantime, the Internet phenomenon continues. The Chicago Tribune (on-line version) reported recently that another 35 million people world wide will become Internet users this year, raising the total number of users to 130 million. This figure is predicted to rise to 350 million by the year 2003. In South Africa, Media Africa (1998) reported a user base of around 1.2 million users. The medium is becoming ubiquitous, and is generally accepted to be an ideal medium for gathering and distributing secondary market research. Unfortunately, it is not being adopted as a primary research tool at the same rate.

The good news is that market research is not the only discipline slow to catch up with the Internet. Harris (1997) points out that marketing activities on the Internet can

largely be regarded as 'practice without theory'. This is confirmed by the fact that there are so far relatively few examples of really successful Internet-based business models.

The topic will be addressed in the following phases:

- Different Internet-based research methodologies will be discussed and highlighted with practical examples
- The benefits and drawbacks of on-line research will be discussed
- Lessons learned and International comparisons will be discussed
- Some ideas for moving forward in implementing Internet-based research in South Africa will be shared
- Potential constraints and pitfalls to avoid will be identified
- Future developments in on-line research will be discussed within the context of converging technologies and platforms.

2. Defining Internet based research

In the context of this paper, Internet-based research (or on-line research) will be regarded as all research using Internet technology as a basis. There are essentially three research models within this context.

i. A World Wide Web based model, where a questionnaire is hosted on a web site/ server. It allows fairly complex interactivity, help facilities and skip procedures. Respondents are lured to the site by e-mail, by means of a banner on the web site, by focused media (such as snail mail or telephone) or by unfocused media such as radio or television (which does not allow probability sampling).

Advantages:

- High level of interactivity.
- Control can be more efficient since it is possible to integrate control procedures with the server architecture. The server can for example verify certain user characteristics or identification codes interactively while the respondent logs onto the questionnaire.

- The questionnaire can be adjusted on the spur of the moment.
- The session variables can be monitored very closely, for instance the time spent on a specific question.
- Data is immediately available, for example for pilot analysis.
- Respondents do not need an e-mailbox (which makes it for instance universities and Internet cafés). It is possible to obtain more meaningful results by drawing a sample out of the customisation database and offer the questionnaire only to a probability sample through a banner link. This sample can then be extrapolated to cover the customised users, the type of users that seek for relationship type interaction from the content/service provider.

Disadvantages:

- Respondent pays for the telephone connection (local charges in UK and South Africa).
- Respondents need an Internet Browser.
- Time spent to complete the questionnaire is reliant on the quality of the connection to the Internet.

ii. An e-mail based model. In this instance the full questionnaire is e-mailed to the respondent. This model has varying levels of interactivity – for example from mailing a Microsoft word document to mailing a fully interactive executable file.

Advantages

- Respondent only pays for the connection time necessary to download the e-mail message and to return the e-mail to the sender.
- Respondent needs access to e-mail only.

Disadvantages:

- Control is restricted to what can be included in the e-mail message.
- Questionnaire can not be altered or deleted on the mail server.
- Data is only available for analysis after mail has been sent back.
- The response mechanism is technically relatively complex.

iii. A hybrid model, which is a combination of the above mentioned models, so that the respondent chooses which model to respond to. For instance, inviting potential

respondents to either complete the questionnaire on a web page or to reply to the e-mail questionnaire.

3. Internet-based research: analysis of cases

To further explore the definitions provided above and to highlight differences between the various methodologies, several practical examples were compared. The variables used to compare them were:

- Incentive offered
- Response rate
- Direct cost
- Time to complete survey

Different examples of studies using the Internet as a basis are discussed below.

- An Internet Service provider performed a customer satisfaction, retention and segmentation study during the period September to November 1998. Two probability samples of 5 000 e-mail addresses each where drawn from the Internet Service Provider database. An e-mail invite to a web-based questionnaire was mailed out on the first of October 1998 at 10:00. One sample was promised 100 double movie tickets for the first 100 completed questionnaires submitted and mouse-pads for the next 200 responses. No incentive was offered to the other sample.
- An Internet service provider launched an Internet based questionnaire to evaluate the their home site. The questionnaire was launched on 25 September 1998 and removed end of day 6 October 1998 (12 days). Small incentives were offered to 30 randomly drawn respondents. A banner on the home page was used to lure on-line users into the questionnaire.
- As part of a doctoral study, 1000 marketing decision-makers were contacted by snail mail. Respondents were offered the option of responding by reply-paid mail (envelope was not included) or completing an on-line questionnaire on a web site.
- A customer satisfaction survey was conducted for a division in a large company. 980 users of this division's services were randomly selected. E-mail was sent to the sample to warn them that a questionnaire would be sent to them the next day

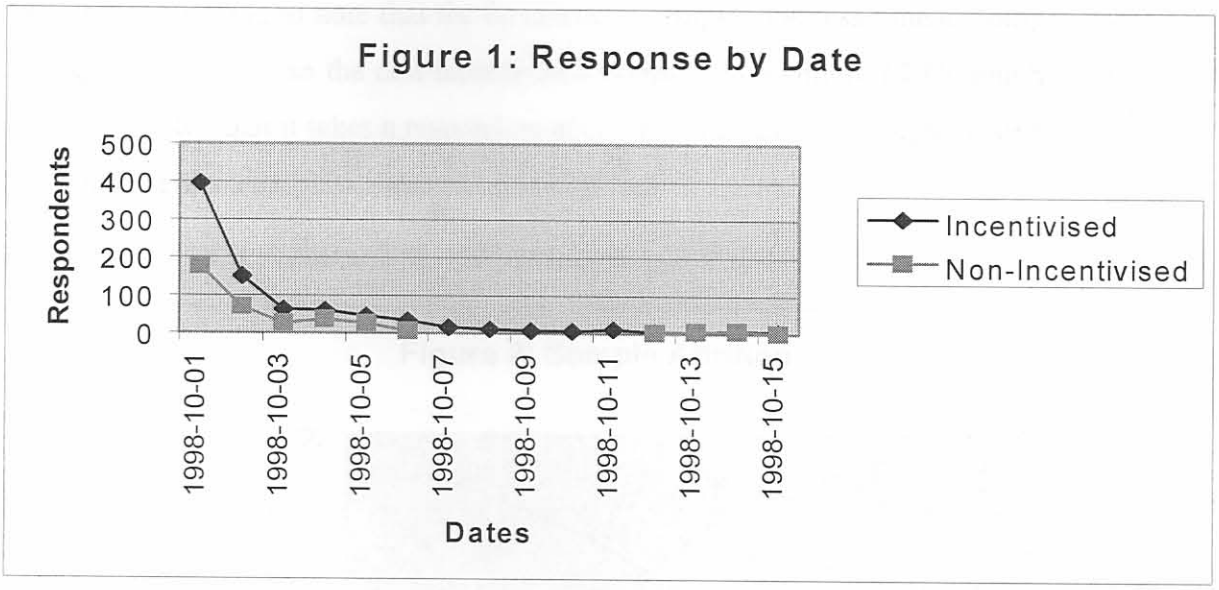
and to solicit co-operation. An executable file was attached to the survey e-mail, which respondents had to open, complete and e-mail back by automated process. The covering letter (on e-mail) announced the incentives, and provided instructions to completing and submitting questionnaires.

- An internal survey on marketing information needs and perceptions was conducted and 136 marketing staff members were contacted by e-mail, containing the questionnaire in an executable file format. The questionnaire had to be completed and returned – this involved a relatively complex procedure. An incentive was provided in the sense that every respondent could get a copy of the report.

The various studies are compared in the following table:

STUDY	**INCENTIVE**	**RESPONSE**	**COST**	**TIMING**
ISP customer satisfaction (5000 sample, WWW based)	Small gifts to first 300	16.5%	R35000	
ISP customer satisfaction (5000 sample, WWW based)	None	7.2%	As above	
Web site rating questionnaire (WWW based, self selection)	Small prizes (random)	1% of 'hits'	-	
Mail survey with WWW option	Feedback	12.3%	R3000	2 months
Internal CSM (e-mail based)	Small gifts to first 30	41.2%	-	10 days
Internal user needs/ perceptions survey	Copy of report	20.1%	-	10 days

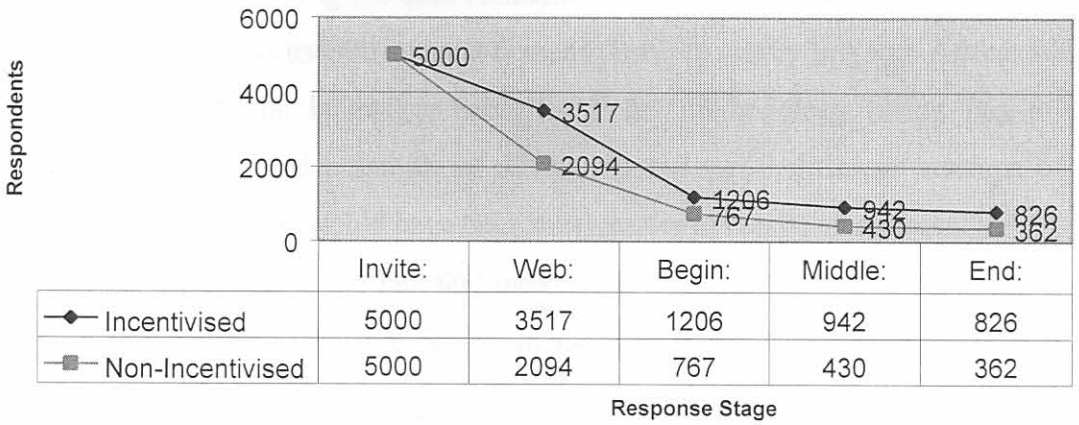
Some interesting observations were made:



- With on-line research, it would seem that the first 48 hours is the most crucial, as approximately 60% of total responses would be received during this time. Figure 1 below relates to the first two case studies (ISP customer satisfaction) and illustrates this principle. In this case, about 66% of responses were received within 48 Hours. After that, response rates taper down sharply. Enander and Sajti (1999) report the same pattern, but have managed to raise response rates substantially by sending out a reminder on the 4th day after questionnaire launch. This resulted in a much higher response to the reminder than with other media, and resulted in an overall response rate for the two samples of 44% and 40% respectively. These authors also reported that the main reasons (in order of priority) for non-response were lack of time, technical problems and lack of interest.
- Incentives seem to make a difference. In cases where incentives are offered, response rates follow similar patterns, but at lower levels of response. In the case above, the non-incentivised response rate was 9.3 percentage points lower than the incentivised response. Enander & Sajti reported a 4% higher response rate for the incentivised sample.
- Probably because of the lack of interviewer intervention, responses taper off quite sharply from start of the questionnaire to finish, as respondents quit during the completion of the questionnaire. This point is illustrated in Figure 2.

- A lot of questionnaires sent out to the ISP customer base were submitted by respondents after office hours – even into the early morning hours.
- It is interesting to note that the incentivised sample took less time to complete the questionnaire than the non-incentivised sample. In addition, McCullough (1998) have noted that it takes a respondent about half the time of a telephone or personal interview to complete a questionnaire on-line.

Figure 2: Sample Attrition



	Invite:	Web:	Begin:	Middle:	End:
Incentivised	5000	3517	1206	942	826
Non-Incentivised	5000	2094	767	430	362

Response Stage

- Generally, whole surveys can be comfortably completed in around 10 working days. This compares well with the findings of McCullough (1998) who have conducted studies in 5 to 6 days on the Web that would have taken 6 to 7 weeks with conventional methods.

4. Advantages and drawbacks of Internet based research

There are many advantages to using the Internet as a primary research tool:

- It provides an additional tool in the toolkit of market researchers, who are increasingly under pressure to come up with more cost effective and innovative research solutions.
- Generally, once money has been spent on buying software, paying for development and so on, there are very little direct costs involved in gathering the

data. In fact, it could be argued that respondents often bear the cost of the 'interview'.

- It saves time. Projects with hundreds of responses can be handled literally in days. Time saved in this way can then be utilised for more thorough analysis and client interface in order to add more value to the research process.
- It is a very flexible research tool, with the ability to build random exposure to different questionnaires, automatic routing, visual aids and other stimuli into the questionnaire. This is particularly relevant since research is evolving into issues of complex design such as discrete choice modelling and conjoint value analysis which is complicating the data collection process. For instance, a discrete choice methodology was used in a recent demand research survey In South Africa. With 6 of the 11 official languages being used, the methodology (using face-to-face interviews) dictated a sample of 1200, exposed to 90 different versions of the questionnaire. This would have been much easier to handle electronically.
- A great advantage is the fact that interviewer error, bias and data capturing errors can be eliminated to a large degree. In addition, it may help overcome the effect of households refusing to co-operate with interviewers, having inaccessible properties and unlisted telephone numbers which may raise the probability of interviewer error.
- Feedback is immediate. Pilot testing can be completed in a very short time frame. In addition, the database of responses can be updated as completed questionnaires are returned, and analysed whenever top line results are required. In fact, judging from the case histories, good top line results may be drawn about 48 hours from questionnaire launch.
- It is a very convenient research tool for the respondent. As the cases have shown, respondents complete questionnaires at times that no sane interviewer would contact them telephonically or in person. In addition it removes all geographical boundaries and international time differences.
- It is a multimedia tool, which means that audio, graphics and video may be included if necessary.

There are, however, some obvious disadvantages or potential problems with Internet-based research as well.

- The high drop-off rate is a concern.
- Generally, response rates are low, similar to response rates encountered in mail-based questionnaires.
- Great care has to be taken in setting up the questionnaires, since in most cases the data is provided back in processed format. For example, if text labels were used instead of numeric labels, this may cause problems later on when analysing the data.
- Response consistency can be a problem. In a face to face or even telephone interview, the interviewer has some contact. In an on-line interview, there is no control over the respondent, and you have no indication of possible fatigue, anger, boredom, intoxication or an altogether unsuitable frame of mind (Stanton 1998).
- There is no guarantee that the person responding is the respondent selected from the sampling frame. One way of overcoming this is by including a unique identifier in the initial solicitation (for example a password; Enander & Sajti 1999).

The next section deals with the more fundamental concerns around Internet-based research.

5. Avoiding the pitfalls

With the benefits to be gained by Internet research it is not surprising that buyers and suppliers alike are trying to reap the benefits of Internet-based research as soon as possible. However, there are many pitfalls waiting. These are discussed below.

Pitfall #1

Research conducted on the on-line population is extrapolated to the general population.

It should by now be obvious that the Internet cannot be used for studies on the general population, since the demographics of the two populations differ dramatically. However, there are segments of the market that are heavily on-line, and these

segments may be successfully targeted with Internet-based research. For example, in large companies, 70% of executives have indicated that they prefer e-mail to all other communication (SA Business Survey 1997).

Pitfall #2

Tomorrow, I am sending everybody on-line a questionnaire.

The fact that that Internet research is so quick and cheap to do belies the fact that there may be a lot of time and expense required before the benefits can be reaped. In this regard, it is important to note the following:

- Internet users are notoriously jealous of their privacy, and can react extremely negatively to unsolicited contact. This may mean that the researcher would either have to obtain commercial, vetted e-mail address lists, or would have to obtain this consent up front. In South Africa, list brokers are only now getting into the business of obtaining e-mail addresses in addition to other contact details for commercial databases. Panels for specific market segments may be another way of solving this problem. In all cases, it is important to ensure that research initiatives conform to legislation and research codes of conduct, for instance the ESOMAR code of conduct for Internet research. The good news is that, once permission is given, respondents are very likely to give permission to be interviewed again. In this regard, Kavanagh (1998) reports a figure of up to 75%.
- Technical problems may arise when incompatibilities between various software versions or systems create complications. Hays (1998) warns that technical problems that may arise when sending questionnaires to networked environments, for instance due to security measures. In addition, technical problems with completing and submitting the questionnaire may arise. Experience has taught that, on the design side, different versions of browsers and e-mail packages should be taken into account. Thorough pilot testing and online 'torture testing' is required to make sure that potential technical problems are solved before questionnaire launch. In addition, clear instructions should be provided to respondents at every opportunity.
- Another concern is the high attrition rate of responses. Between steps in the response process, and even during questionnaire completion, sample attrition is high (see figure 1 and 2). Even the number of drop-offs in the beginning and

middle of samples is a concern. This necessitates the quest innovative means of ensuring respondent attention and click-through to next steps in the process. There is the potential that the respondent may not be the intended respondent, or that the respondent, using an alias, responds more than once. In the ISP case the customer database was used to validate respondents as subscribers and make sure they complete only one questionnaire. Currently, ISPs and companies hosting mail servers are the only entities in a position to control of these problems, since they control all e-mail addresses and aliases from their databases.

- The Internet is not representative of the broader population, which limits its uses to specific grouping who are heavily on-line. Some examples of this include decision-makers in large businesses, specific professional groups, 'home office' type consumers and internal company research.
- With design being a crucial factor in on-line research, it may be necessary to spend a lot of time (and possibly money) on the design of on-line questionnaires.

Pitfall #3

Tomorrow I am firing my research supplier and hiring an IT company

Internet-based research moves research takes market research into the realm of information technology, and this may prompt certain IT companies to become 'research vendors' by cutting costs and corners and avoiding traditional recruitment techniques (Kavanagh, 1998). However, before research suppliers are fired in large numbers, it should be remembered that Internet-based research is not a new paradigm, but merely another tool for conducting research. On the other hand, market research suppliers cannot expect that it is business as usual – they will have to adapt as well and assist their clients in reaping the benefits of Internet-based research.

8. Moving forward with Internet-based research

One of the causes of criticism of Internet research seems to be a result of organisations either trying to reap the benefits of Internet based research prematurely or simply trying to 'get on the bandwagon'. It has to be stressed that Internet research may in fact require a considerable 'ramp-up' in terms of preparation before the benefits can be reaped. It should still be used subject to the rigors of the research process. In other

words, the research process should drive the decision whether Internet based research (compared to the advantages and disadvantages of other media) is a proper medium to use, and not vice versa. An added problem stems from eliminating the variable cost of data collection combined with the ease of administering large samples. This tempts the researcher to go for sheer numbers, which creates the danger that the online population may become over-researched, creating further attrition in response rates. Therefore, sampling plays a vital role even in Internet based research. Some practical guidelines for implementing Internet-based research are discussed below:

- While experimenting with Internet based research, it may be a good idea to validate findings by running parallel control groups outside of the Internet using conventional research media. That will give an indication whether findings from the Internet based sample can be extrapolated. In this regard, Taylor & Terhanian (1999) have achieved very similar results between on-line and telephonic polling, while Willke, Adams & Girnius (1999) have reported very similar results for on-line and central location interviewing.
- In instances where the full sample can not be reached via Internet based research, hybrid survey methods like telephone and Internet may present a practical solution to make a survey more affordable and comprehensive.
- Using a panel may provide some solutions. This may be done in two ways. The first option is to develop and implement a custom panel of the required target market. Another option (not yet available in South Africa) is to make use of a commercial panel such as Decision Analyst or SurveySite, who also screen and select the respondent base to be exposed to the survey from their panels (Mosley-Matchett 1998).
- It is suggested that all questionnaires should contain standard demographic/ corpographic or behavioural questions that can be linked back to the organisation's market segments. This will assist in validating the survey data with known population figures.
- Care should be taken to apply the right tool to the right kind of research. For instance, Web site guest books, Web boards and newsgroups can offer quick, valuable qualitative market intelligence but cannot be 'sold' as focus groups (Harris 1997).

- In Internet based research, design is a critical issue. Case histories have shown that design has to take place with the data processing in mind. In addition, design has to facilitate the flow of the questionnaire, and care needs to be taken to provide ample instructions. It is useful to give the respondent an indication of progress with the questionnaire. Graphics and open questions should be used sparingly to facilitate speed.

As researchers, we should:

- Experiment and document to help build out the theory of Internet based research.
- Never substitute quality for quantity. Just because high numbers of responses can be generated is no reason to do it.
- Use the Internet as a convenient and cost effective way to survey execution in conjunction with conventional methods. The Internet widens the response options that may be offered to potential respondents.
- Select the sample frame independently from the survey method used wherever possible. This is a problem not restricted to Internet based research since the same problem, for instance using telephone directories to select samples representing the general population, may occur with other methodologies.

9. Future pointers

There are a number of questions about the future impact of Internet-based research. Some of these are highlighted below.

- Research on the Internet is remarkably easy to conduct, with software providing a lot of the required functionality. The temptation may justifiably exist for organisations to take online research in-house. In addition, organisations that are not researchers (such as ISPs) may start to encroach on the terrain of the market research vendor. What is the effect of this going to be on the industry? One suggestion is that the market researcher of the future will be a technology 'hybrid'. Another potential avenue is one of future co-operation between e-mail list brokers, research suppliers, IT companies and ISPs.

- When and how will the flexibility of Computer Aided Personal Interviewing (CAPI) and Computer Aided Telephone Interviewing (CATI) tools be combined with Internet based research tools to get the 'best of both worlds'?
- Tools already exist to process qualitative questions by means of advanced content analysis (often requiring analyst intervention to complete). This may pave the way for automated applications of qualitative research.
- Currently ISPs have the best contact data to reach the Internet user. The search for a single sampling frame may require the co-operation of all ISPs, commercial list brokers and market research vendors.

6. Conclusions and recommendations

From the above discussion it is clear that the Internet provides an exciting additional tool that can provide organisations with relatively cheap data on fast turnaround times. However, organisations that want to use it should not be seduced by the 'smoke and mirrors' of generating sheer numbers very quickly, but should utilise the Internet in enhancing their long term research strategy. In this way, the organisation will be able to obtain the benefits of Internet research, while retaining the value of conventional research processes.

Perhaps the last words belong to Taylor and Terhanian (1999):

> *'This* [on-line research] *is an unstoppable train, and it is accelerating. Those who don't get on board run the risk of being left far behind.'*

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The authors:

Peet Venter is the Senior Manager, Competitive Intelligence at Telkom.

Meyer Prinsloo is the Tribal Rainmaker at Spicer Professional Services.

Appendix D: Questionnaire

intekom CORPORATE

INTEKOM CUSTOMER SATISFACTION SURVEY

INSTRUCTION:

As we value your opinion, it is very important for you to carefully consider each question and answer it as honestly as possible.

Below you will find a set of statements regarding the quality of service at Internet Service Providers (ISPs) in general and Intekom in particular. We would like your impressions about INTEKOM's service performance relative to your expectations. Please think carefully about the following two levels of service evaluation:

- Your DESIRED SERVICE LEVEL - the level of service performance you desire from an Internet Service Provider; (See first row)
- Your PERCEIVED LEVEL OF SERVICE PERFORMANCE - your perception of INTEKOM's service performance over the last few months. (See second row)

DESIRED SERVICE LEVEL:

Based on your experiences as an Internet user, please think

DESIRED SERVICE LEVEL:

Based on your experiences as an Internet user, please think about the Internet Supplier that would deliver the kind of service your desire.
If you feel a feature require a high level of service performance, click the number 10 in the first column.
If you feel that you require no level of service at all click on the 1 in the first row.
If your feelings are less strong, click on one of the buttons in the middle. Remember that there are no right or wrong answers - we are interested in what YOUR desired level of service performance is for an Internet Supplier delivering excellent quality of service.

PERCEPTIONS OF INTEKOM

The second aspect of each statement (second row) relates to your perception of INTEKOM. For each statement, please describe how you perceive Intekom's current level of service performance regarding the feature in each statement. Once again, clicking on the 0 means that you perceive Intekom's service at a non-existent level, and by clicking a 10 means that you view Intekom's service performance at an exceptionally high level

To EXIT Click Here | Straight to the Survey

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://question.intekom.com/cgi-bin/Question/intpg1.pl

Links Archives Best of the Web Channel Guide Customize Links Free HotMail Internet Start Microsoft Windows Update

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Personal Details

Title and initials: Mr PJM

Last name: Prinsloo

Postal Address: Maria Bronkhorstreet 175
Ashley Gardens 0081

Telephone Number & Code During Office Hours: 0827721120

Submit...

Done Internet zone

intekom CORPORATE

Personal Details

Please complete **all** the fields, as the information is necessary for us to compile the statistics:-

Please enter your e-mail address: jester@intekom.co.za

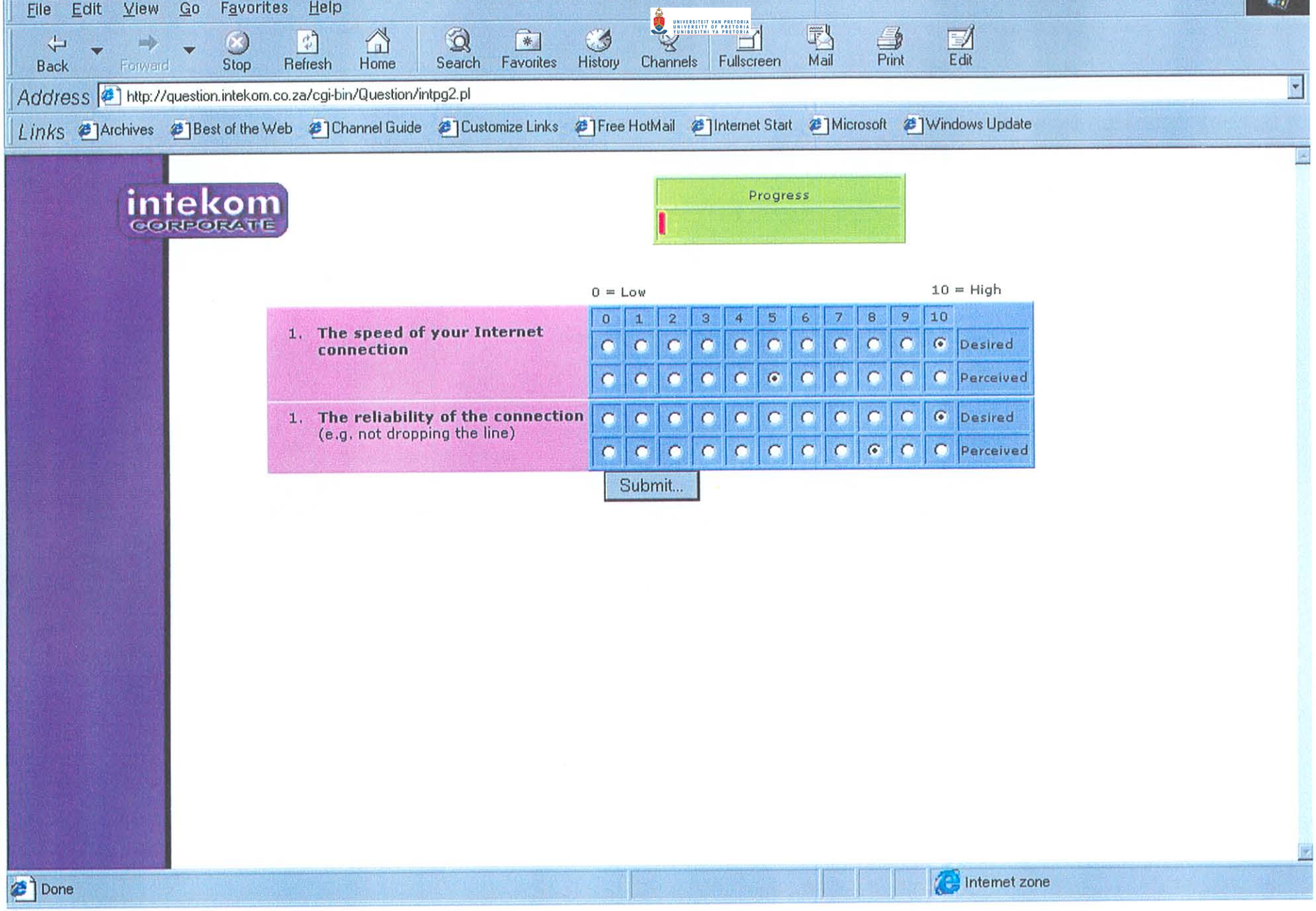
Which of the following POP's/Towns are Closest to your Internet connection: Pretoria (56Kflex)

Postal Code if you have it 0081

Gender (•) Male ( ) Female

Age Group : ( ) Under 19 (•) 20 - 30 ( ) 31 - 40 ( ) 41 - 50 ( ) 51+

Submit...

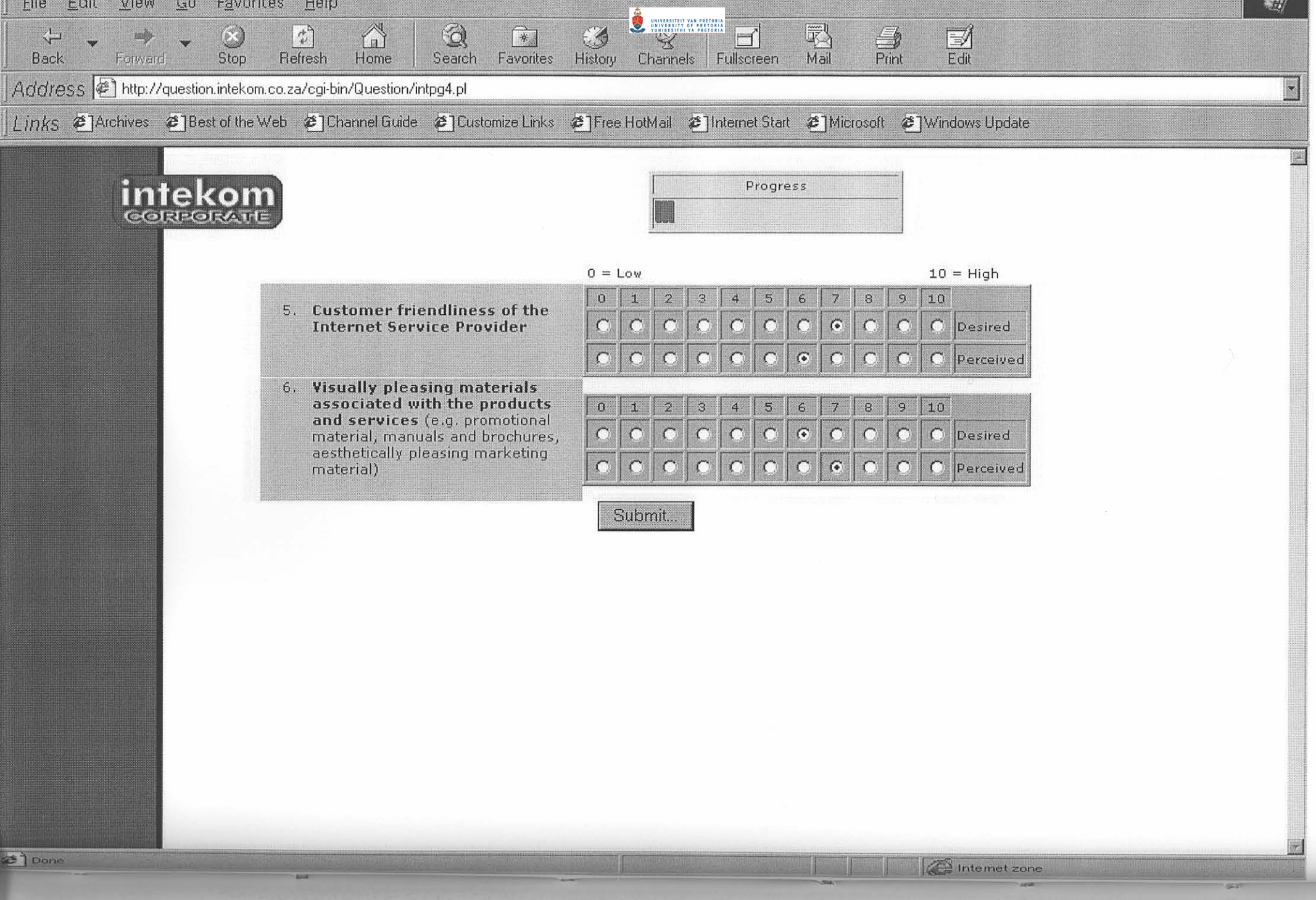

File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://question.intekom.co.za/cgi-bin/Question/intpg2.pl
Links Archives Best of the Web Channel Guide Customize Links Free HotMail Internet Start Microsoft Windows Update
intekom CORPORATE
Progress
0 = Low
10 = High
1. The speed of your Internet connection
1. The reliability of the connection (e.g. not dropping the line)
0 1 2 3 4 5 6 7 8 9 10
Desired
Perceived
Submit...
Done
Internet zone

intekom CORPORATE

Progress

	0 = Low										10 = High	
	0	1	2	3	4	5	6	7	8	9	10	
3. **The availability of a connection** (e.g. line availability)	○	○	○	○	○	○	○	○	○	○	◉	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived
4. **Technologically advanced Infrastructure**	○	○	○	○	○	○	○	○	○	○	◉	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived

Submit...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Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://question.intekom.co.za/cgi-bin/Question/intpg4.pl
Links Archives Best of the Web Channel Guide Customize Links Free HotMail Internet Start Microsoft Windows Update
intekom CORPORATE
Progress
0 = Low
10 = High
5. Customer friendliness of the Internet Service Provider
0 1 2 3 4 5 6 7 8 9 10
Desired
Perceived
6. Visually pleasing materials associated with the products and services (e.g. promotional material, manuals and brochures, aesthetically pleasing marketing material)
0 1 2 3 4 5 6 7 8 9 10
Desired
Perceived
Submit...
Done
Internet zone

intekom CORPORATE

Progress

	0 = Low										10 = High	
7. **When promising to do something, the ISP does so** (e.g. returning calls, arrival at training sessions, delivery of material, appointments, activation of services)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	○	○	◉	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived
8. **When customers have a problem, the ISP shows a sincere interest in solving it** (e.g. complaints, technical problems)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived

Submit...

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://question.intekom.co.za/cgi-bin/Question/intpg6.pl

Links Archives Best of the Web Channel Guide Customize Links Free HotMail Internet Start Microsoft Windows Update

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Progress

	0 = Low										10 = High	
9. **Carrying out all services correctly the first time** (configuration, support services, enhancements)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	○	◉	○	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived
10. **Providing the service at the promised time** (e.g. follow-up of enquiry's, fax back of application responses and account activation information fax)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	○	◉	○	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived

Submit...

Done

Internet zone

intekom CORPORATE

Progress

	0 = Low										10 = High	
11. **Providing error free documentation** (e.g. keeping records, Internet explorer setup instructions)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	○	○	◉	Desired
	○	○	○	○	○	◉	○	○	○	○	○	Perceived
12. **Keeping customers informed about when services will be performed** (e.g. delivery, invoicing, follow-up, maintenance and enhancements)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	◉	○	○	○	○	○	○	Perceived

Submit...

intekom CORPORATE

Progress

	0 = Low										10 = High	
13. **Prompt service to customers** (e.g. setting up appointments, returning calls, resolving problems)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived
14. **Willingness to help customers** (e.g. to answer questions, technical assistance, providing information)												
	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	○	○	○	◉	○	Perceived

Submit...

intekom CORPORATE

Progress

	0 = Low										10 = High	
	0	1	2	3	4	5	6	7	8	9	10	
15. **Readiness to respond to customer's requests** (e.g. response to complaints, help & assistance.)	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	◉	○	○	○	○	Perceived
16. **The attitude and behavior of employees that instills confidence in customers**	○	○	○	○	○	○	○	◉	○	○	○	Desired
	○	○	○	○	○	○	◉	○	○	○	○	Perceived

Submit...

intekom CORPORATE

Progress

	0 = Low										10 = High	
	0	1	2	3	4	5	6	7	8	9	10	
17. **Customers that feel secure in their involvement** (e.g. can trust them)	○	○	○	○	○	○	○	○	○	○	◉	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived
18. **Ensuring that problems are resolved above expectation** (doing it "very right" the second time)	○	○	○	○	○	○	○	○	○	○	◉	Desired
	○	○	○	○	○	◉	○	○	○	○	○	Perceived

Submit..

intekom CORPORATE

Progress

	0 = Low										10 = High	
	0	1	2	3	4	5	6	7	8	9	10	
19. **Employees that are always courteous with customers** (e.g. good telephone manners, handling customers with respect, showing consideration)	○	○	○	○	○	○	○	◉	○	○	○	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived
20. **Being a credible Internet Service Provider** (e.g. trustworthiness, integrity and honesty, name & reputation)	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived

Submit...

intekom CORPORATE

Progress

0 = Low 10 = High

	0	1	2	3	4	5	6	7	8	9	10	
21. **Employees that have the knowledge to answer customer's questions** (e.g. knowledge and skill of personnel, providing general information on day-to-day issues)	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived
22. **Always being approachable** (e.g. easy access to management, prompt telephone access, ease of contact)	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived

Submit...

intekom CORPORATE

Progress

	0 = Low										10 = High	
23. **Treating customers with empathy** (e.g. treat customers with dignity, demonstrating understanding with complaints, guarding against confrontation)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	◉	○	○	○	○	Desired
	○	○	○	○	○	○	◉	○	○	○	○	Perceived
24. **Keeping customers informed and listening to them** (e.g. supplying information on technological advancements, attentive to changing customer needs)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	○	◉	○	○	Desired
	○	○	○	○	○	○	◉	○	○	○	○	Perceived

Submit...

intekom CORPORATE

Progress

	0 = Low										10 = High	
25. **Providing personal attention** (e.g. acknowledgment of customer dislikes, support during problems)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	◉	○	○	○	Desired
	○	○	○	○	○	○	○	○	◉	○	○	Perceived
26. **Have customer's best interests at heart** (e.g. building long-term relationships)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	◉	○	○	○	Desired
	○	○	○	○	○	○	○	◉	○	○	○	Perceived

Submit...

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Progress

	0 = Low										10 = High	
27. **Understanding the specific needs of customers** (e.g. assessment of customer requirements)	0	1	2	3	4	5	6	7	8	9	10	
	○	○	○	○	○	○	○	◉	○	○	○	Desired
	○	○	○	○	○	○	◉	○	○	○	○	Perceived

Submit...

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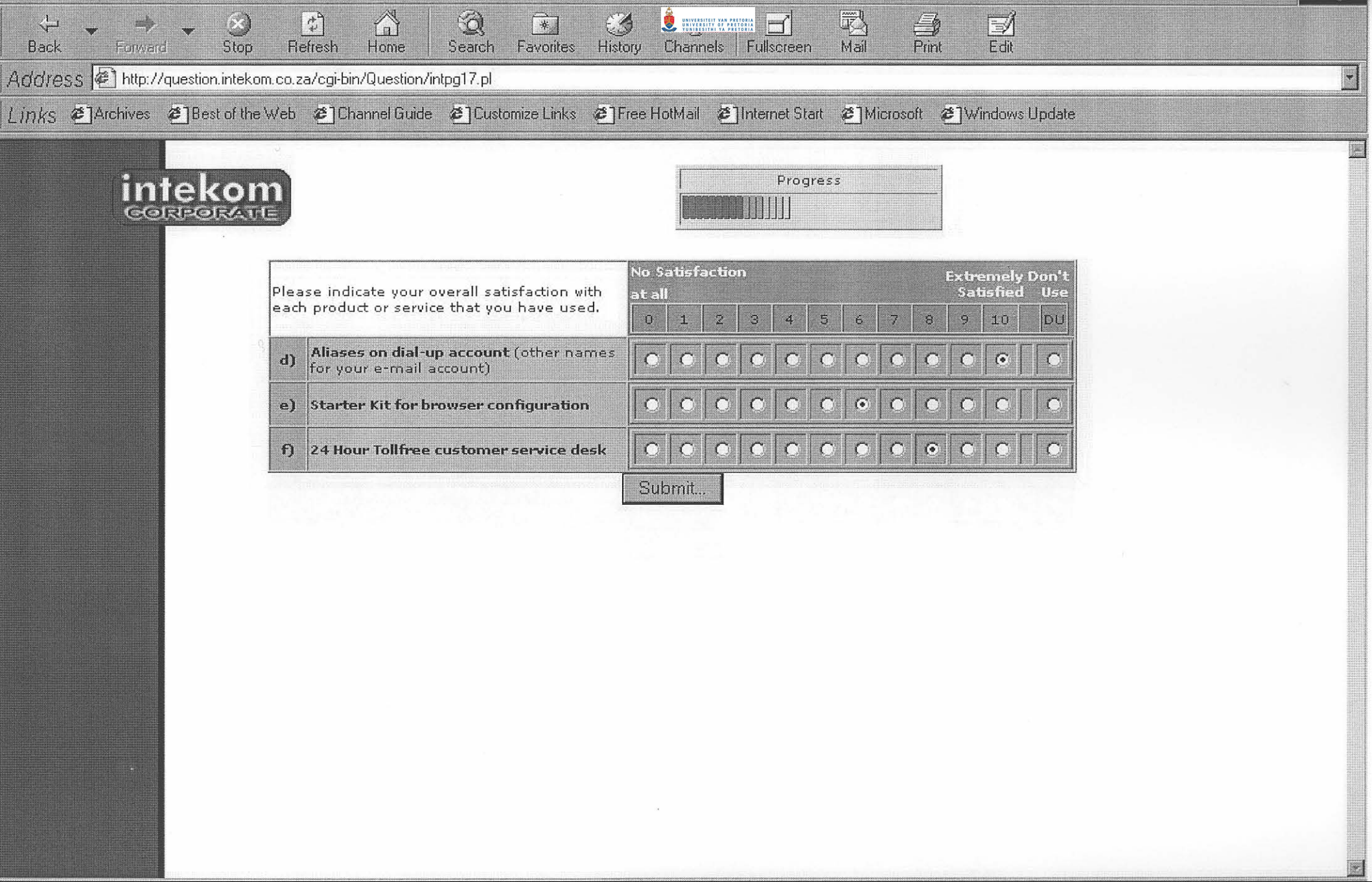
Progress

Please indicate your overall satisfaction with each product or service that you have used.		No Satisfaction at all 0	1	2	3	4	5	6	7	8	9	Extremely Satisfied 10		Don't Use DU
a)	**Dial-up Connection** (ppp - connect to the Internet through your modem via a standard telephone line)	○	○	○	○	○	○	◉	○	○	○	○		○
b)	**E-mail**	○	○	○	○	○	○	○	○	◉	○	○		○
c)	**5Mb free personal webspace** (personal webpage created)	○	○	○	○	○	○	○	○	○	○	○		◉

Submit...


Back
Forward
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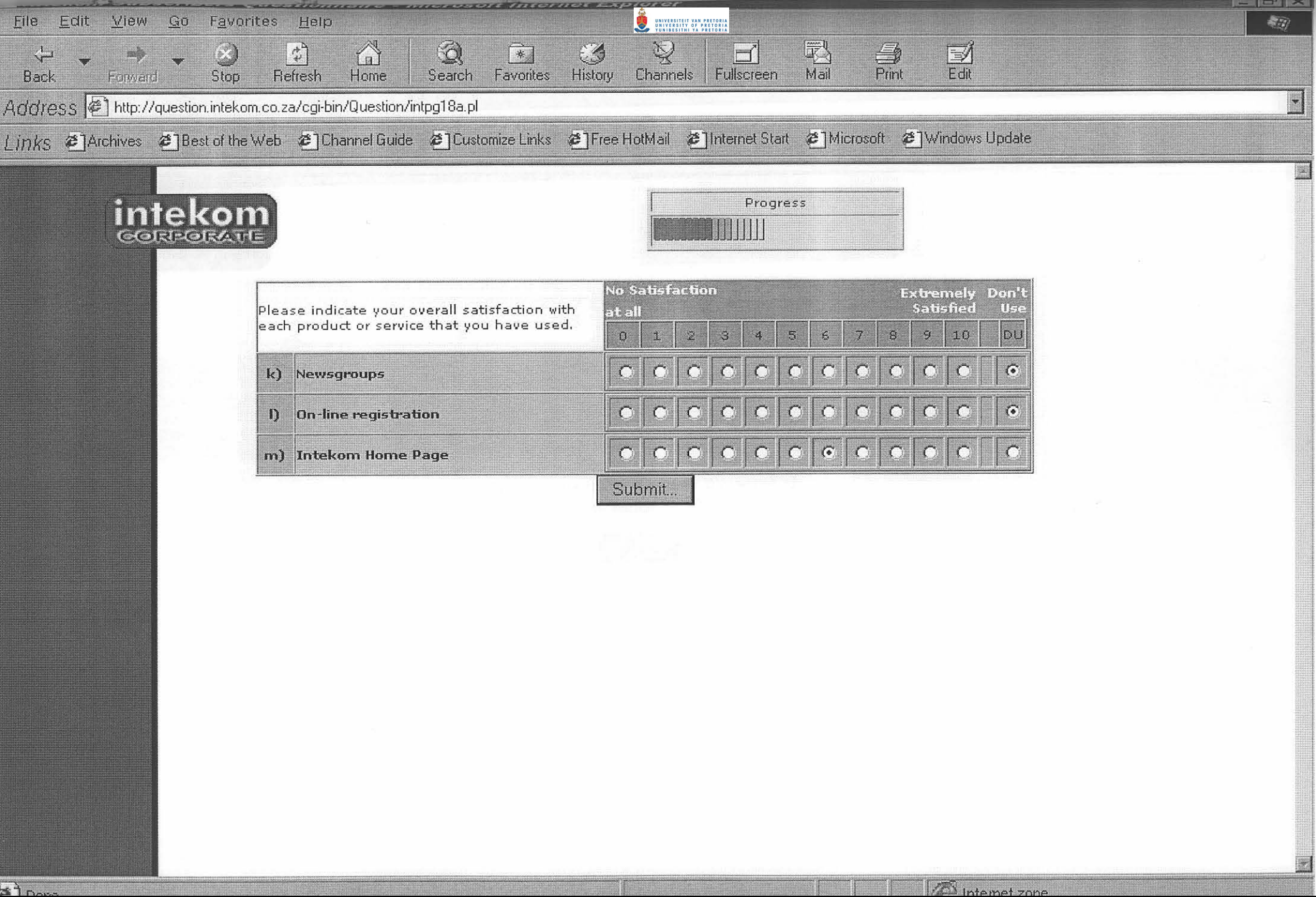
Refresh
Home
Search
Favorites
History
Channels
Fullscreen
Mail
Print
Edit
Address
http://question.intekom.co.za/cgi-bin/Question/intpg17.pl
Links
Archives
Best of the Web
Channel Guide
Customize Links
Free HotMail
Internet Start
Microsoft
Windows Update
intekom
CORPORATE
Progress
Please indicate your overall satisfaction with each product or service that you have used.
No Satisfaction at all
Extremely Satisfied
Don't Use
0 1 2 3 4 5 6 7 8 9 10 DU
d) Aliases on dial-up account (other names for your e-mail account)
e) Starter Kit for browser configuration
f) 24 Hour Tollfree customer service desk
Submit...

intekom CORPORATE

Progress

Please indicate your overall satisfaction with each product or service that you have used.		No Satisfaction at all 0	1	2	3	4	5	6	7	8	9	Extremely Satisfied 10		Don't Use DU
g)	**Intekom Newsletter**	○	○	○	○	○	○	◉	○	○	○	○		○
h)	**Communicating on the Internet** eg. sending e-mail and or using chat programs	○	○	○	○	○	○	○	○	○	○	◉		○
i)	**Surfing the Internet** eg. clicking on links, searching for information	○	○	○	○	○	○	○	◉	○	○	○		○
j)	**Transacting on the Internet** eg. buying goods/services through the Internet and/or doing home banking	○	○	○	○	○	○	○	○	◉	○	○		○

Submit...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Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://question.intekom.co.za/cgi-bin/Question/intpg18a.pl
Links Archives Best of the Web Channel Guide Customize Links Free HotMail Internet Start Microsoft Windows Update
intekom CORPORATE
Progress
Please indicate your overall satisfaction with each product or service that you have used.
No Satisfaction at all
Extremely Satisfied
Don't Use
0 1 2 3 4 5 6 7 8 9 10 DU
k) Newsgroups
l) On-line registration
m) Intekom Home Page
Submit...

intekom CORPORATE

Progress

	How much of your time using the Internet is spent on:-	How important would you rate the following:-
Communicating e.g. using e-mail and/or chat programs	70%	70%
Surfing the World Wide Web e.g clicking on links and/or using search engines to find information	20%	10%
Doing transactions on the Internet e.g ordering goods and/or doing home banking	10%	20%

[please note that the sum of the answers]
[for these questions must total 100%]

Submit...

intekom CORPORATE

Progress

How much of your time using the Internet is spent on:-

(If one of the two options are not applicable to you please enter 0%)

....**my own use and not for business** - users that operate a PC at their homes for purposes other than to generate revenue and/or run a home-based business.	30%
.....**business** - users that operate their PC at home and/or business with the purpose to generate revenue, do business and/or run a home-based business	70%

[please note that the sum of the answers]
[for these questions must total 100%]

Submit...

intekom CORPORATE

Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

	I am very skilled in....	Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**...communicating** on Internet e.g. e-mail and/or chat programs	○	○	○	○	○	○	○	○	○	○	◉
b)	**... surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	○	○	○	○	○	○	○	○	○	○	◉
c)	**... doing transactions on the Internet** e.g ordering goods or doing home banking	○	○	○	○	○	○	○	○	○	○	◉

Submit...

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Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

	I consider myself knowledgeable about...	Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**... the available options in communicating on Internet** e.g. e-mail and/or chat programs	○	○	○	○	○	○	○	○	○	◉	○
b)	**... the available options surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	○	○	○	○	○	○	○	○	○	◉	○
c)	**... the available options doing transactions on the Internet** e.g ordering goods or doing home banking	○	○	○	○	○	○	○	○	○	○	◉

Submit...

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Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

	I know more than most people about...	Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**...communicating on the Internet** e.g. e-mail and/or chat programs	○	○	○	○	○	○	○	◉	○	○	○
b)	**... surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	○	○	○	○	○	○	○	◉	○	○	○
c)	**... doing transactions on the Internet** e.g. ordering goods or doing home banking	○	○	○	○	○	○	○	◉	○	○	○

Submit...

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Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

	The following is a challenge to me...	Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**...communicating on Internet** e.g. e-mail and/or chat programs	◉	○	○	○	○	○	○	○	○	○	○
b)	**... surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	◉	○	○	○	○	○	○	○	○	○	○
c)	**... doing transactions on the Internet** e.g. ordering goods or doing home banking	○	○	○	○	○	○	◉	○	○	○	○

Submit...

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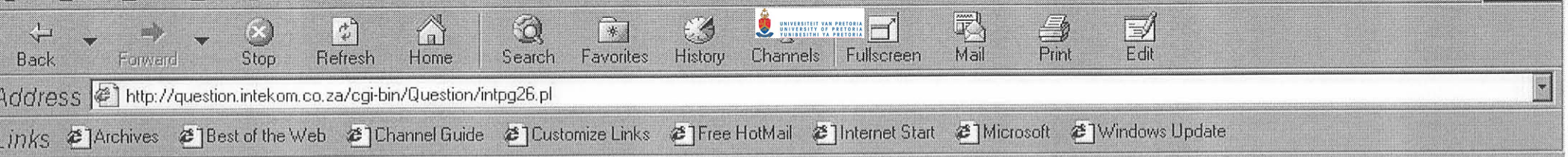
Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

The following challenges me to perform to the best of my ability...		Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**...communicating on Internet** e.g. e-mail and/or chat programs	◉	○	○	○	○	○	○	○	○	○	○
b)	**... surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	◉	○	○	○	○	○	○	○	○	○	○
c)	**... doing transactions on the Internet** e.g. ordering goods or doing home banking	◉	○	○	○	○	○	○	○	○	○	○

Submit...



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Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

The following provides a good test of my Internet skills...		Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**... communicating on Internet** e.g. e-mail and/or chat programs	○	○	○	○	○	○	○	◉	○	○	○
b)	**... surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	○	○	○	○	○	○	○	◉	○	○	○
c)	**... doing transactions on the Internet** e.g. ordering goods or doing home banking	○	○	○	○	○	○	○	◉	○	○	○

Submit...

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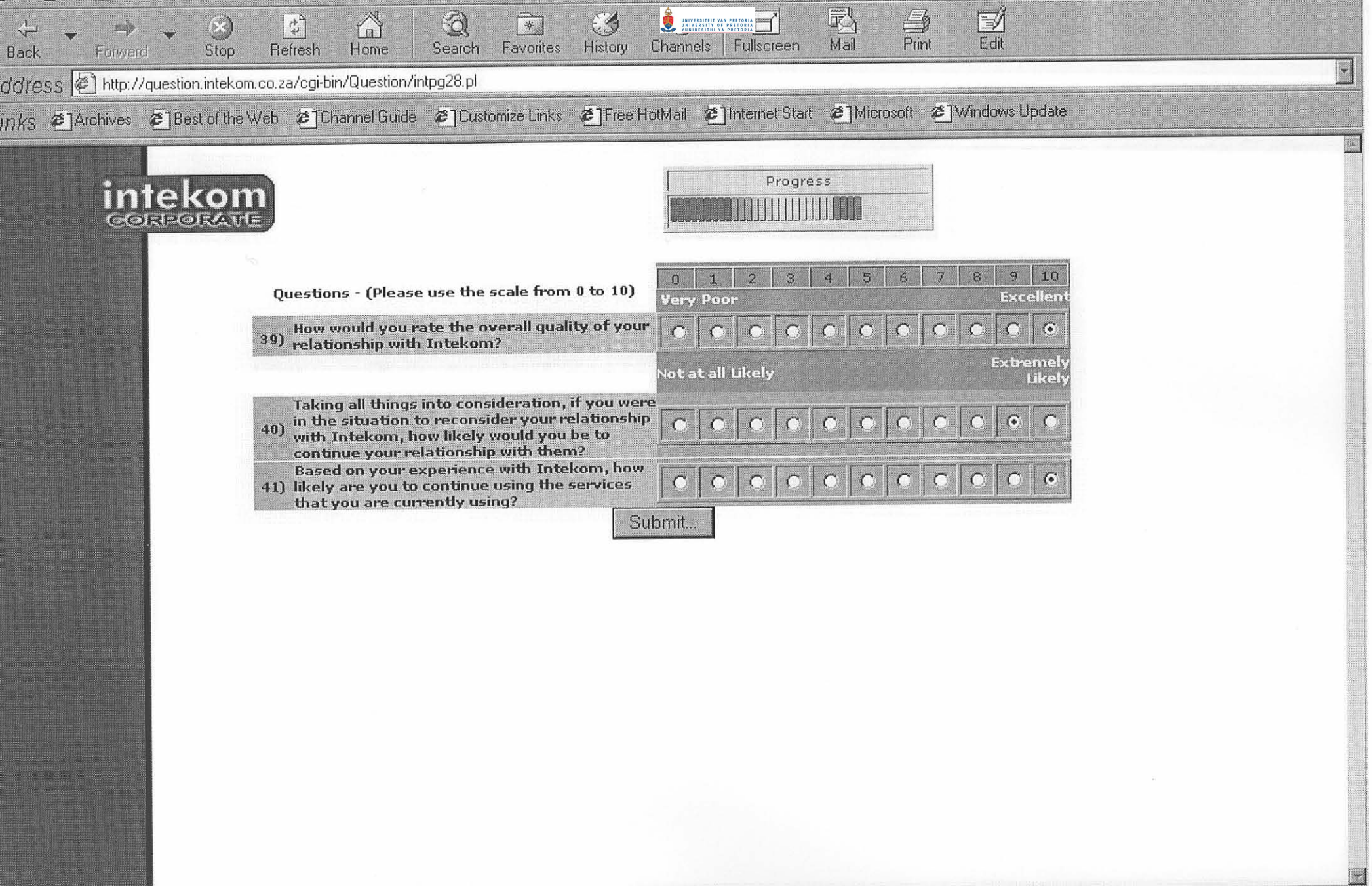
Progress

In this section we are using a sliding scale where 0 (the left most button) means that you do not agree at all and a 10 (the right most button) means that you totally agree with the statement.

I find that the following stretches my capabilities to the limits...		Do Not Agree At ALL 0	1	2	3	4	5	6	7	8	9	Totally Agree 10
a)	**... communicating on Internet** e.g. e-mail and/or chat programs	◉	○	○	○	○	○	○	○	○	○	○
b)	**... surfing the World Wide Web** e.g clicking on links and/or using search engines to find information.	◉	○	○	○	○	○	○	○	○	○	○
c)	**... doing transactions on the Internet** e.g. ordering goods or doing home banking	◉	○	○	○	○	○	○	○	○	○	○

Submit...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http://question.intekom.co.za/cgi-bin/Question/intpg28.pl
Archives
Best of the Web
Channel Guide
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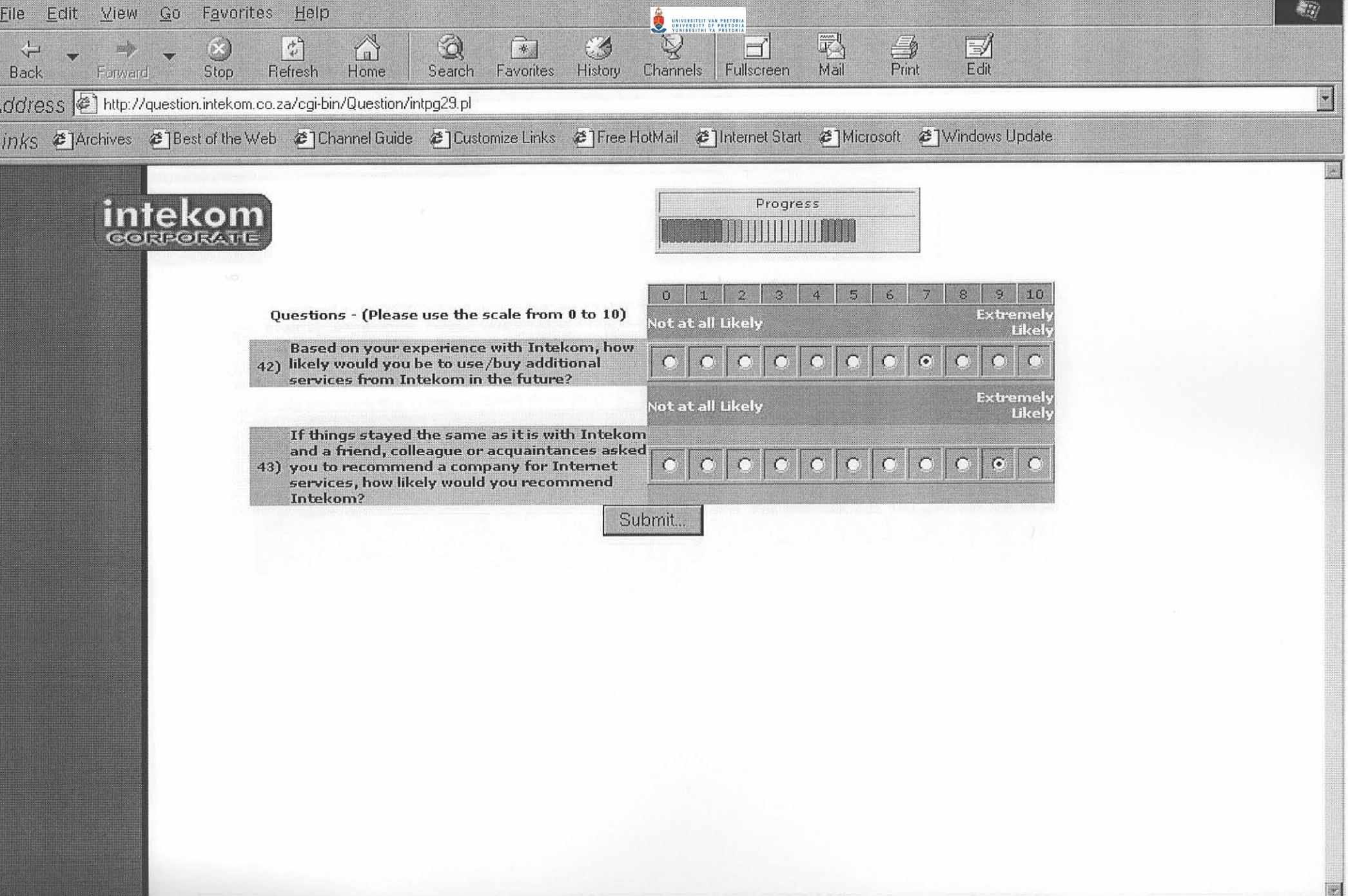
Free HotMail
Internet Start
Microsoft
Windows Update
intekom
CORPORATE
Progress
Questions - (Please use the scale from 0 to 10)
0 1 2 3 4 5 6 7 8 9 10
Very Poor
Excellent
39) How would you rate the overall quality of your relationship with Intekom?
Not at all Likely
Extremely Likely
40) Taking all things into consideration, if you were in the situation to reconsider your relationship with Intekom, how likely would you be to continue your relationship with them?
41) Based on your experience with Intekom, how likely are you to continue using the services that you are currently using?
Submit...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Archives Best of the Web Channel Guide Customize Links Free HotMail Internet Start Microsoft Windows Update
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Progress
Questions - (Please use the scale from 0 to 10)
0 1 2 3 4 5 6 7 8 9 10
Not at all Likely
Extremely Likely
42) Based on your experience with Intekom, how likely would you be to use/buy additional services from Intekom in the future?
Not at all Likely
Extremely Likely
43) If things stayed the same as it is with Intekom and a friend, colleague or acquaintances asked you to recommend a company for Internet services, how likely would you recommend Intekom?
Submit...

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Please indicate your overall perception of INTEKOM compared to other ISPs, Content Providers and/or Internet Companies. Please give an indication of your image or perception of the competitors - even if you do not know them very well.

Indicate by clicking the appropriate option on the scale. If you can not rate any competitor at all, please mark the category "Don't Know (DK)"

	0	1	2	3	4	5	6	7	8	9	10		DK
	Very Poor										Excellent		DK
a) Intekom	○	○	○	○	○	○	○	◉	○	○	○		○
b) Internet Solutions (TIS)	○	○	○	○	○	○	○	○	○	◉	○		○
c) Icon	○	○	○	○	○	○	○	○	○	◉	○		○
d) UUNet Internet Africa	○	○	○	○	○	◉	○	○	○	○	○		○

Submit...

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Progress

Please indicate your overall perception of INTEKOM compared to other ISPs, Content Providers and/or Internet Companies. Please give an indication of your image or perception of the competitors - even if you do not know them very well.

Indicate by clicking the appropriate option on the scale. If you can not rate any competitor at all, please mark the category (DK) "Don't Know "

	0	1	2	3	4	5	6	7	8	9	10		DK
	Very Poor										Excellent		DK
e) Global Internet Access	○	○	○	○	○	◉	○	○	○	○	○		○
f) Mweb	○	○	○	○	○	◉	○	○	○	○	○		○
g) Yebo-Vodacom Internet	○	○	○	○	○	○	○	◉	○	○	○		○
h) Net Active	○	○	○	○	○	○	○	◉	○	○	○		○

Submit...

Intekom Subscribers Questionnaire - Microsoft Internet Explorer

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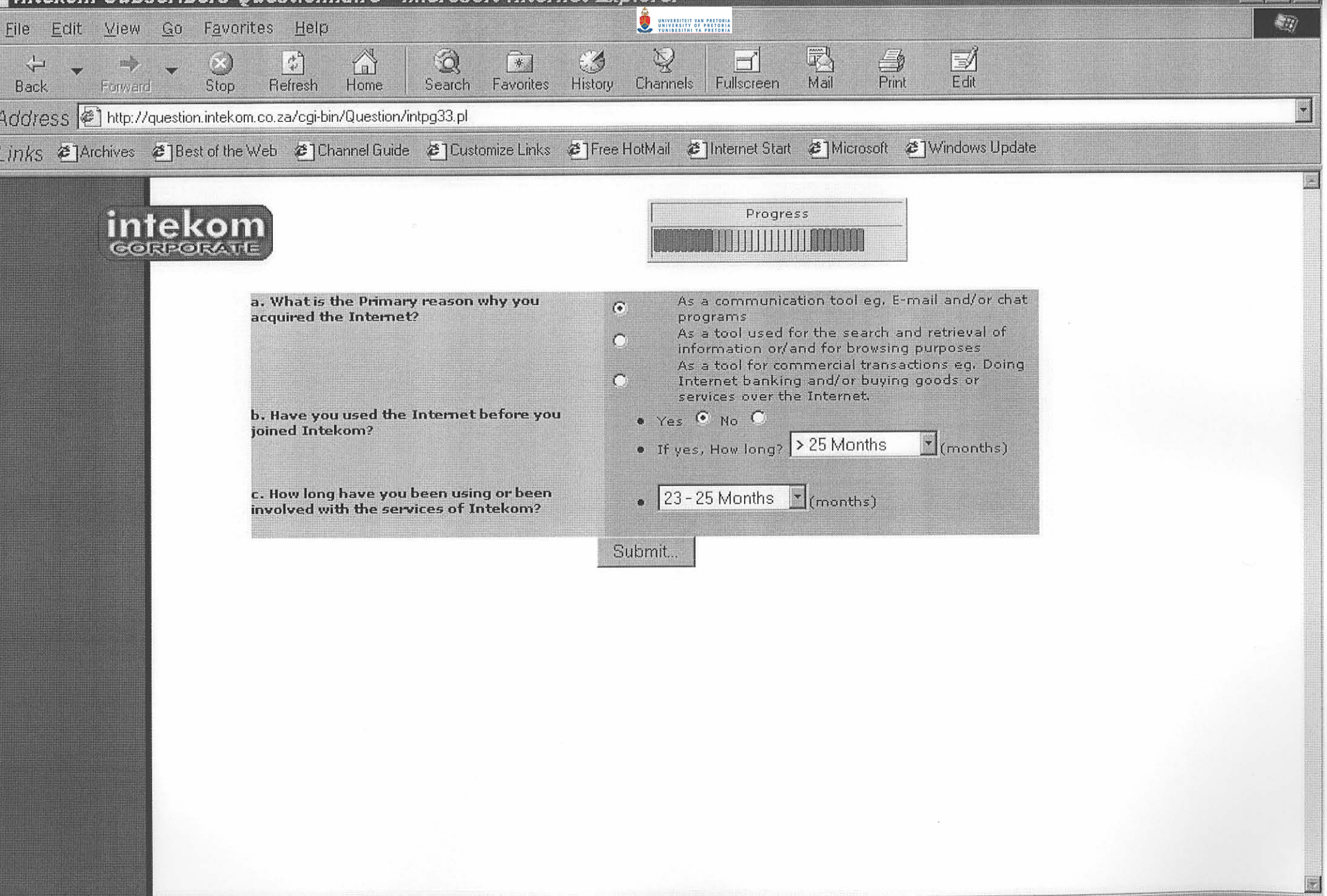
a. You log onto the Internet 1 times on average	per day
b. How long, on average, do you spend on the Internet per login? (minutes)	76 - 90
c. Which time of the day do you mostly use the Internet?	Afternoon (12:00 - 17:00)
d. From where do you access the Internet?	Both

submit...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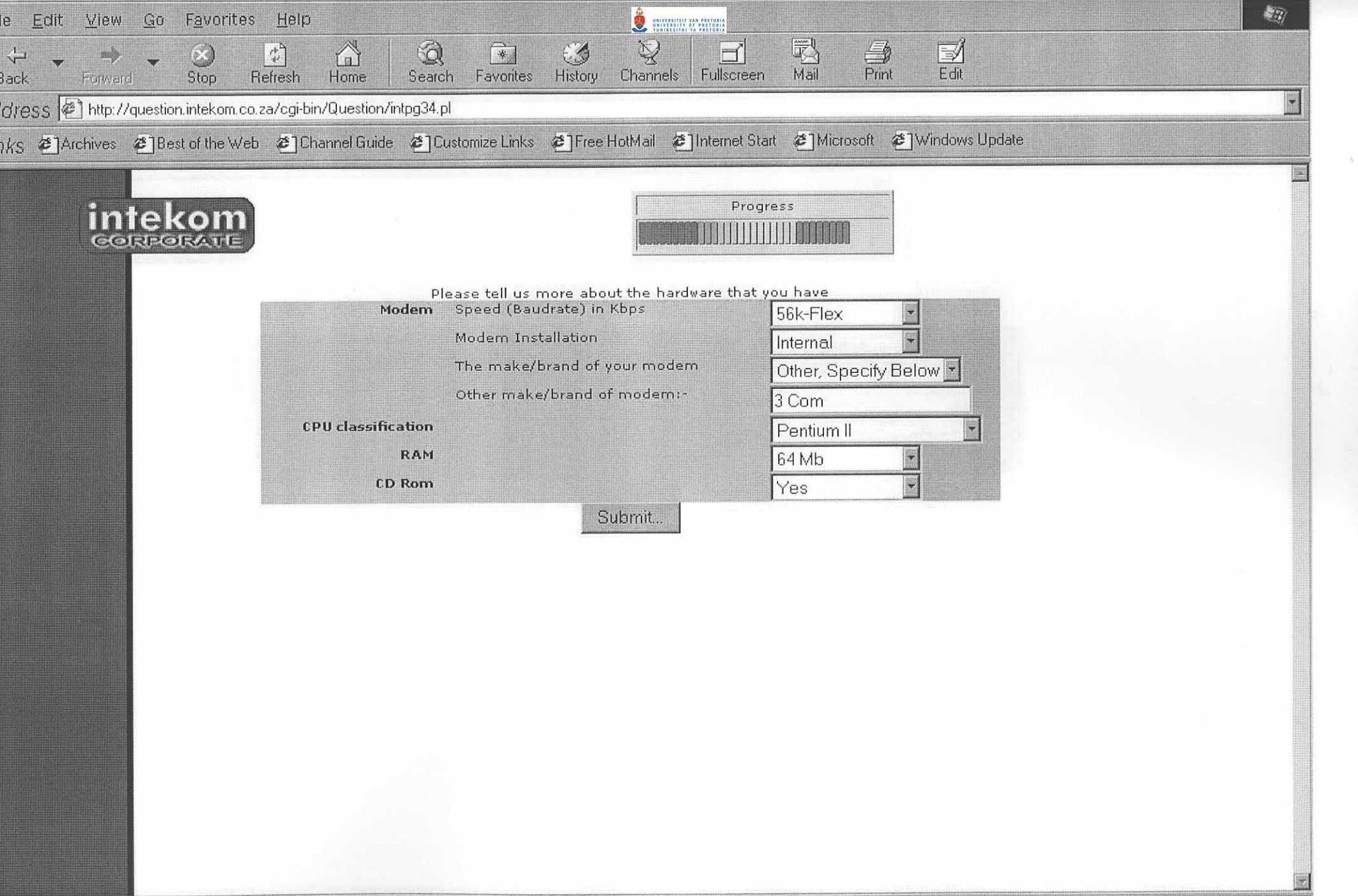
a. What is the Primary reason why you acquired the Internet?
As a communication tool eg. E-mail and/or chat programs
As a tool used for the search and retrieval of information or/and for browsing purposes
As a tool for commercial transactions eg. Doing Internet banking and/or buying goods or services over the Internet.
b. Have you used the Internet before you joined Intekom?
Yes No
If yes, How long? > 25 Months (months)
c. How long have you been using or been involved with the services of Intekom?
23 - 25 Months (months)
Submit...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Please tell us more about the hardware that you have
Modem
Speed (Baudrate) in Kbps
56k-Flex
Modem Installation
Internal
The make/brand of your modem
Other, Specify Below
Other make/brand of modem:-
3 Com
CPU classification
Pentium II
RAM
64 Mb
CD Rom
Yes
Submit...

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Please tell us about the software that you use:

48. **a) E-mail software package:**	Outlook Express
Others - Specify	
48. **b) Software used for surfing the Internet (Browsers)**	Internet Explorer Ver 4 +
Others - Specify	

Submit...

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ddress http://question.intekom.co.za/cgi-bin/Question/intpg36.pl

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49. How did you get connected to Intekom?	Used the Service Desk Support to configure telephonically (0800 111 720)
	Other please specify :-

Submit...

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50. **Have you ever succesfully performed a commercial transaction through the Internet?**
(eg ordered a CD, software, Internet banking, Medical Aid, Buying/Selling of Shares, etc)

YES (•) NO ( )

If NO, which of the following reasons best describe your reason for not doing so?

- Not Interested -

Other, specify -

If yes, what transaction did you do/what did you buy?"

Books and Internet Banking

Submit...

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Have you experienced any problems with Intekom's service in the past 6 months? Yes ○ No ◉

If YES, please specify

If you answered YES to the previous question, was the problem resolved to your satisfaction? Yes ○ No ○

If NO, please specify

Submit...

intekom CORPORATE

THANK YOU FOR YOUR CO-OPERATION - WE APPRECIATE YOUR VALUED INPUT!

Thank You

It is clearly understood that this is not a competition and that there are no prizes. The give-aways are a token of our appreciation thanking our customers for joining us in our quest for excellence. Intekom holds no responsibility for any emails not received or incorrectly received from any participant and/or for any detail of any participant incorrectly received

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keyword

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select above and click here ↑

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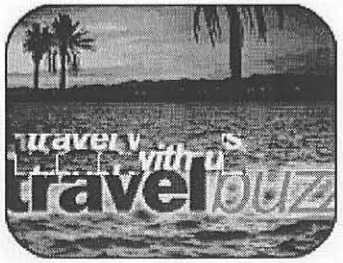
welcome

Contact Us! **10 June 1999**



Tip of the week

Need to get connected? What are the costs involved, what do you need to do to get connected and what do you get when you connect to Intekom? Click here and find out all you need to know!

KIDS!! Win Intekom badges and rulers.

Explore - Family

You can't imagine how many woman's special interest sites there are on the Net. Check out a few in Women's World , while men and women will find the business sites in Men's Web useful. CyberParent focuses on overcoming divorce and there is plenty for teens in Young Adults, and children in Kids Place.

Entertainment

Find that cheat code in our Games section or have a good laugh in our