The Applicability of Various E-Commerce Business Models to the British Settlers in Natal Project

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Declaration

This dissertation is original work by the author and has not otherwise been submitted in any form for any degree or diploma to any University. Where use has been made of the work of others it is duly acknowledged in the text.

angela spencer.

Acknowledgements

Abstract

This dissertation considers possible e-commerce business models to apply to a local genealogy initiative, the British Settlers in Natal Project.

This is a research project by a local historian called Shelagh Spencer. It studies the first wave of British immigration to Natal. Seven volumes of biographical entries have been published in series called *British Settlers in Natal: 1824-1857 - A Biographical Register*.

The dissertation considers the creation of an e-commerce business model for this project. The market for the work is investigated through various means, chiefly by the use of a questionnaire on the project's website *http://www.shelaghspencer.co.za*. A number of possible business models are considered and after analysis of the survey results two possible models are suggested.

Best practice in building a web site is discussed, and then best practice in building an e-commerce web site is considered. After that two examples of highly successful e-commerce web sites are considered. All these examples of best practice are benchmarked against both the current business model and the proposed future business models.

Chapter 1 – Research Methodology

Background to the Study

This dissertation considers the relevance of various business models to the development of an online business model for a local genealogy project. The project in question is a biographical register of the first British colonists who settled in Natal in a seven volume series entitled 'British Settlers in Natal: 1824-1857' written by Shelagh Spencer.

Problem Statement

Very little is known about the online genealogy market in South Africa. In the United States web sites like Ancestry.com are extremely lucrative, so the question arises - would a South African genealogy site be as successful? The project under consideration – the British Settlers in Natal Project – concentrates on the first British Settlers in Natal. Do the researchers of these early settlers comprise a sufficiently sizable group to support a successful business model? If the local researchers are not sufficiently wealthy and interested to uphold the online business model could the international descendents in the former British colonies provide the critical mass to sustain the project?

There are a number of other unknowns about the online community – how large is this community? Where is it located? How wealthy is this community? How much is it prepared to pay for information found on the internet? Does it value the information it finds on the site of a professional genealogist?

There may be a number of business models available to a South African genealogy web site, but based on these questions, which will be the most worthwhile?

Research Objective

The purpose of this research is to:

- Gather information about the market for the British Settlers in Natal Project.
- Determine the best online business model for the British Settlers in Natal Project.

Literature Review

The following works were referred to in order to write this dissertation:

Business Research Methods by Cooper and Schindler (Cooper and Schindler, 2000); Ghauri, Kronhaug and Kristianslunds' *Research Methods in Business Studies: a practical guide* (Ghauri, et al, 1995) and White's *Dissertation Skills for Business and Management Students* (White, 2000) were used to structure the research component of the dissertation.

Martin Zollner's article *The Changing Face of Genealogy in South Africa: Die Veranderende Genealogiese Toneel in Suid Afrika* (Zollner, 2001) was a very useful introduction to the local arena. Conrad Mercer's article *Genealogy and the Internet* (Mercer, 1999) and Stefan Wehmeyer's *Genealogie op die Net - Help! Ek soek my familie!* (Wehmeyer, 2001) supplied a valuable list of resources, newsgroups, websites and chat rooms.

Webchek, a local internet research company, provided much information about the South African internet market on their website (Webchek, 2003).

An overview of the international genealogy market was obtained by looking at a number of articles, notably those by Christopher Blank (Blank, 1998), Jennifer Godwin (Godwin, 1999) and Stephanie Stoughton (Stoughton, 2000).

A wide range of international genealogy sites from Canada, the United Kingdom, America, Australia and New Zealand were accessed in order to get a picture of the

broader online genealogy world. Specific sites accessed were myfamily.com, Cyndi's List, RootsWeb.com, Origins.net, Ancestral Quest, Association of Professional Genealogists web site, Association of Professional Genealogists in Ireland web site, Association of Scottish Genealogists and Record Agents web site, British Ancestors Family History Services web site, Genealogical Computing Group web site, GenealogyPro and the GENUKI web site.

Rayport and Jaworski's *e-Commerce* was used to construct possible business models for the project (Rayport and Jaworski, 2001). Strauss and Frost's *E-Marketing* was also helpful in that regard (Strauss and Frost, 1999), as was Lynn Ward's *Hidden costs of building an E-Commerce Site* (Ward, 2003).

In Chapter 3 David Stauffer's article *Is Your Benchmarking doing the right work?* provided a useful definition of benchmarking (Stauffer, 2003). For the section on usability two of Jakob Nielsen's books - *Designing Web Usability: The Practice of Simplicity* (Nielsen, 2000) and *Homepage Usability: 50 Websites Deconstructed* (Nielsen and Tahir, 2000) were used. Other useful sources were: http://usability.gov, the American National Cancer Association's web site on usability, Rosenfeld and Morville's *Information Architecture for the World Wide Web* (Rosenfeld and Morville, 2002) and Tauber and Kienan's *Webmastering for Dummies* (Tauber and Kienan, 2001). Jakob Nielsen's article *Two Sigma: Usability and Six Sigma Quality Assurance* provided information about why usability is important (Nielsen, 2003).

In the discussion on Search Engine Optimization Jill Whalen's article *Ten tips to the top of Google* was drawn upon as well as her web site http://www.highrankings.com (Whalen, 2003). Danny Sullivan's site *Search Engine Watch* (http://www.searchenginewatch.com) was also consulted.

The section on E-Commerce best practice drew on Keith Regan's article *Building an e-commerce community: friendship sells* (Regan, 2002), Philip Bannister's *Ten best practices in online retailing* (Bannister, 2002) and Alexis Gutzman's *The E-Commerce Arsenal: twelve technologies you need to prevail in the digital arena - Globalization and Multicurrency Capability* (Gutzman, 2001).

In chapter four eBay and its affiliate sites SquareTrade.com and PayPal.com were used to build up a background about the company. The Economist article '*Queen of the online flea market*' (Emmott, 2003) also provided useful background about the company, as did Troy Wolvertons article '*eBay's Surge Restarts Growth Gab*' (Wolverton, 2003).

Benefits of the Study

As far as the author is aware, this is the first South African study of online genealogy business models. It is hoped that this study will increase the body of knowledge of South African genealogy business models.

Research Design

Explorative: Qualitative and Quantitative

A literature review will be conducted to find any information relevant to the study. After that background information will be gathered about e-commerce and genealogy web sites from newspapers and journals and an interview will be conducted with Shelagh Spencer to determine her knowledge of the market for her work. Case studies of various e-commerce and genealogy web sites will be conducted in order to understand their business models.

Hit counter software will be placed on the British Settlers in Natal web site home page to measure its usage and an online survey will be run on the British Settlers in Natal web site. This survey will measure customer demographics, expectations and spending power.

Sample Selection and Size

The survey sample will be drawn from visitors to the web site, who comprise the following groups:
- KwaZulu-Natal residents
- South African residents

- United Kingdom residents
- Residents from ex-British Colonies (U.S.A., Australia, New Zealand, Canada etc).
- Descendants of early settlers
- Researchers into settler history who are not descendants of the settlers.

The sample represents a broad reflection of the possible market for the project.

Thirty-four responses to the questionnaire were received during the 28 days it was online and there were 179 hits on the home page during that time. The number of hits on a page does not accurately reflect the number of visitors to a site however, as a single user can access the home page more than once during the duration of his or her visit to the site. It is hard to calculate the number of unique visitors to the site, but an approximation would be that the total would be 150. This would make the sample of respondents replying to the questionnaire 23%.

Data Collection Method and Instrumentation

Data will be collected through observation, interviews, hit counter software and an online survey. The online survey software used was the XP version of Perseus SurveySolutions Professional – a program that conducts web surveys, collects the results and presents them in table format. This package has been dubbed a 'top notch survey solution' by PC Magazine (King, 2002).

The hit counter used was http://www.free-hit-counters.com/, one of the most sophisticated free hit counter tools available. Results from the hit counter are to be found in Appendix C and the survey results are to be found in Appendix D.

Ethical Requirements

Ethical standards were strictly adhered to during the course of the study in the following ways:

- The hit counter tool was carefully checked to ensure that visitors privacy would not be compromised when entering the site.

- Respondents to the survey were informed about how their responses would be used. No personal information was collected from the respondents.

Data Analysis

The data analysis for the survey will be performed by the Perseus SurveySolutions Professional package. This package will present the survey results in tabular format.

Results

Online Hit Counter

The results of the online hit counter can be found in Appendix C. A brief summary of these results follows:

- Visitors per Month - After the advertising of the web site in September hits climbed steadily at a rate of approximately 19 hits per month from October 2003 to January 2004.

- Referring Sites – The main referring site was www.genealogy.co.za, a South African genealogy site, the other two main referring sites were an international and local search engine respectively: Google and Aaardvark.

- Visitors by Country – The majority of visitors came from South Africa.

Online Questionnaire

The results of the online questionnaire can be found in Appendix D. A brief summary of these results follows:

- Origin of Visitor – The main number of visitors came from KwaZulu-Natal, the next joint highest number was from the rest of South Africa and the United Kingdom (both with the same number of visitors).

- Preferred Method of Acquiring Genealogical Records – Respondents indicated that they preferred to download genealogical records online. One respondent indicated that he or she would prefer to buy them in CD Rom format.

- Reasonable Price of Genealogical Record – When asked what they thought whether the acceptable price of a record should be R10 or R30 most respondents indicated that R10 was an acceptable price. Some respondents indicated that they were prepared to pay R30, saying that they thought it was a reasonable price.

Structure of the Study

Chapter 1.

The first chapter of the dissertation covers the general background to the research, the problem statement, a summary of the methodology used, the objectives of the study and ends by running through the organization of the study.

Chapter 2.

This chapter explains the background of the British Settlers in Natal (BSN) Project and examines the state of South African genealogy in general as well as the market for this work, both in South Africa and abroad and both through the internet and conventional ‘bricks and mortar’ channels.

Chapter 3.

This chapter discusses possible business models for the project and an investigation of the added value the project would gain online is undertaken. A range of possible e-commerce business models are considered in detail, particularly that related to selling records online and its variations. As part of this investigation a web site called 'British Settlers in Natal 1824-1857' (www.shelaghspencer.co.za) was created. This site is a companion site to the series of books. In order to measure researcher attitudes to buying individual biographical records online a survey was placed on the site. This survey attempted to establish who the online market for the project is, where it is located and what their response to online selling of the biographical records would be. The results of other research will also be discussed, for example the hit counter statistics from the BSN web site and the visitor comments received on the site. After the results of the online survey were considered, along with the e-commerce business models available two possible business models for the project were proposed.

Chapter 4.

The fourth chapter considers best practice in the creation of e-commerce web sites. It begins with an investigation of general best practice in building a web site, looking at the fields of usability, search engine optimization and building an excellent search function. Best practice in the arena of e-commerce is then considered, with reference to fine-tuning a site to handle retail operations, competing in a global arena and building community on a web site. In conclusion the existing BSN web site and the proposed future business models are benchmarked against these best practices.

Chapter 5.

The fifth chapter looks at two case studies of web sites that are considered examples of best practice. The first, eBay represents best practice in the fields of both information selling (the BSN project is also an example of an information selling site) and e-commerce (eBay is considered one of the worlds most successful e-commerce sites). The second, Rootsweb, is an

example of best practice in online genealogy, which is regarded by many commentators as one of the world's best genealogy web sites. The current business model and the proposed future business models will be compared to these sites in order to gain information about best practices which could be applied to them.

The dissertation will conclude by discussing which of the business models (or elements thereof) are most relevant to the project under consideration, taking into account all the market research available as well as the two case studies. A final recommendation about what kind of online business model should be adopted will be made.

Chapter 2 – Background to the Project and the Market for this work

Introduction

This chapter starts by discussing genealogy in general and then the British Settlers in Natal (BSN) project in particular. The current state of genealogy in South Africa, both on and offline will be examined, and then the focus will move to the market for the project - where it is located, how much spending power it has and why people are interested in studying genealogy.

What is Genealogy?

Genealogy is defined by the Oxford Dictionary as 'an account of descent from an ancestor, given by listing the intermediate persons' (Hawkins, 1979).

The History of the British Settlers in Natal Project

British hunter traders first moved to Port Natal (Durban) in 1824 to take advantage on the burgeoning ivory trade in the area. This small community was joined by an array of fortune seekers, missionaries and traders who trekked to Natal from the Cape Colony. Once British rule was firmly established in Natal in 1845 various schemes were put in place to bring permanent settlers from Britain to settle the new colony.

Since the 1960s local historian Shelagh O'Byrne Spencer has been compiling biographies of the first wave of British settlers (the term 'British' denotes settlers of English, Irish, Scottish and Welsh origin). Her project covers the approximately 2800 settlers that came to Natal between 1824 and 1857. The reason why the research concludes at 1857 is that a new wave of immigration began in that year and 1857 functions as a cut off point between the original settlers and the next group to arrive. Today Spencer has published seven volumes of these biographies in the series known as 'British Settlers in Natal 1824 - 1857: a Biographical Register'. This work has won

high acclaim; one review from the African Book Publishing Record reads: 'It is a scholarly historical work and, as it proceeds, will be of immense value to historians of southern Africa and of British colonisation overseas. This work is to be highly recommended.' Spencer also received the Genealogical Society of South Africa's 'Genealogist of the Year Award' in 1993.

At present the register is published as a series of volumes organised alphabetically – 'Abbot to Ayres', 'Babbs to Bolton', ending with volume 7: Gadney to Guy. Some of the settlers did not stay long (a large contingent moved to Melbourne in Australia for example) but others established themselves and KwaZulu-Natal residents still hear their names today, for example: Campbell, Dunn, Fynn, Farewell and Gardiner.

Spencer looks at who these settlers were, where they came from, why they chose to emigrate, who they married and who their children were. Each entry consists of a biography of the head of the household (male or female) or persons emigrating alone. This is followed, where applicable, by a list of children, with brief details of their careers, their dates and places of birth, marriage and death and the place of birth and death of their spouses. Finally, there is a source list for each entry. To date 1057 biographies have been published by Spencer's publishers, the University of Natal Press. Every volume after the first contains an 'Addenda and Corrigenda' section where additions or corrections to biographies already published are included. This is necessary because genealogy is a dynamic field – researchers share information and new facts come to light.

The sources consulted to write the biographies, apart from books and journal articles are:
- The official records of births and deaths of the Department of the Interior (as it was then)
- Private manuscripts in archives and libraries
- Church registers, plaques and cemeteries
- Family Bibles (it was the practice at that time to record family births and deaths in the family Bible)
- Diaries, Letters and Memoirs

- Deceased, Insolvent and Assigned Estates
- Papers of the Supreme Court, the Surveyor General, the European Immigration Department, the Colonial Secretaries Office and Government House.

The Current Genealogical Environment in South Africa

Martin Zollner, a highly experienced South African genealogist makes a number of interesting points about the state of genealogy in our country in his article 'The Changing Face of Genealogy in South Africa'. There are many comments that apply to the present discussion, the most pertinent follow. Zollner speaks of dwindling government funding for National Archives budgets and genealogical collections. 'It is widely accepted that genealogy has a limited commercial market in South Africa. Genealogical research is so labour and time intensive that production costs can seldom be recovered from the client' he notes (Zollner, 2001). Zollner mentions that the number of formal genealogical associations has increased, particularly the number of family societies (Ibid). Family societies are organizations in which members of a particular family share information about their family and organise family gatherings. Zollner feels that even though there has been an increase in the amount of genealogical material available on the internet or on CD Rom there will always be a demand for printed genealogical publications. He notes that although many genealogical organizations answer simple questions without charge the line between research that should be free of charge and the research that should be paid for is not very clear (Ibid). He also notes that it is important to establish one unified South African database with verified data, he believes this ideal should be 'pursued actively' (Ibid). Zollner's observations have much relevance for the creation of the business model for this project and will be discussed in more detail in Chapter Four.

The Current Business Model for the BSN Project

The section below outlines how the project functions at the moment. It is necessary to understand how the project operates currently in order to determine appropriate business models for the future.

Funding

As Zollner mentioned there is little state funding for genealogy and genealogical research is so time-consuming that it is very expensive. For the duration of the project Spencer has received hardly any remuneration from her work. When a volume is to be published a deposit of approximately R30 000 is advanced. The deposit comes from the 'British Settlers in Natal Publication Fund', a fund set up by supporters of the project. The deposit covers the cost of the publication process. If there are any royalties from the sale of the books after the costs have been covered they return to the publication fund. At the moment there is enough funding for the project to stay non-commercial. However this situation may change in the future and it is instructive to know what options are available if a commercial model were to be introduced.

Manufacture and Distribution

The series is published by the University of Natal Press (UNP). UNP works with Mrs Spencer to edit the biographies to make them 'camera-ready'. This acts as an important quality control. Once the book has been published the press markets the work and supplies it to local bookshops.

E-Commerce Business Model

Currently the E-Commerce business model consists of a web site called 'British Settlers in Natal 1824-1857' (www.shelaghspencer.co.za). This site links to the University of Natal Press web site (www.unpress.co.za), which sells copies of the register online. The site is a companion site to the series of books and provides in introduction to the project and scholarly reviews of the books as well as a list of the names of the original settlers, biographical information about Shelagh Spencer, pictures and maps taken from the books and information about various aspects of settler life. It also lists settlers that left Natal for other colonies like America and New Zealand.

The Market

This section will discuss the market for the project; it's size, geographic location, demographic composition and spending power. The focus here is specifically on the online market and the rates at which the market is adopting the internet as this information is necessary for the formulation of an e-commerce business model. The increasing popularity of the study of family history will also be discussed.

Who is the Market?

The market for this work would be any person who seeks information about the first wave of British Settlers in Natal, be they a professional researcher, student, librarian, archivist or amateur genealogist researching their ancestry.

Geographic location of the market

Geographically the market would be concentrated in a few key areas – at least 70% in KwaZulu-Natal, then 15% in the rest of South Africa, after that 5% in the United Kingdom, 5% in Australia and 5% in the rest of the world, particularly the former British colonies. These statistics are derived from the results of hit counter software on the web site and from discussions with Mrs Spencer (Spencer reports that she gets approximately four postal queries a month from overseas correspondents {Spencer, 2004}) Since the establishment of the project's web site approximately double that number of queries have been coming through electronically.

Demographic composition of the Market

Since the original settlers were English-speaking Europeans one might make the assumption that their ancestors would be the same. However this assumption would be erroneous - John Dunn had forty-eight Zulu wives for example! Thus although the descendants will mostly be English-speaking white people, there will be a good proportion of 'mixed race' ancestors who may speak Afrikaans or even Zulu.

A rough estimate of the possible size of the market has been made (See Appendix A). However because of the variables involved - the length of a generation is very different from what it was 150 years ago, and so is the average family size - it is impossible to make these calculations with a great deal of accuracy. An approximate calculation would be in the region of 273 130 descendants. This would be a group of people who have a direct reason to research their past. However, that does not mean that they would do so.

Adoption of Internet Technology

The table below illustrates Media Use by United States households. The United States is not the main market for the book, but it could present a taste of things to come. People are moving from one form of media to another. The term for this phenomenon is Media Convergence – the evolution of different types of media content (news, information and entertainment) traditionally found in different types of media into a single digital media base available on the internet.

Table 1. Media Use by United States households diagram

Hours	1992	2000
Internet	2	43
Books	100	96

(Worthington-Smith, 2001).

How does this table apply to the local context? It is well established that a high proportion of the population of developed countries is online (Nua.com, 2004). In developing countries the figure is much lower. The Fourth South Africa Internet Services Survey, conducted in 2000, stated that two million South Africans had internet access at that time. It estimated that five million South Africans would be online by the year 2004 (Worthington-Smith, 2001).

Spending Power of the International Market

A study by the Online Publishers Association found that 14.2 million US consumers paid for online content last year (Morrissey, 2003).

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Online Genealogy is becoming extremely popular. Ancestry.com, the major e-genealogy site was rated 7th in terms of 2002 top web destinations by consumer content revenue (Online Publishers Association, 2003). 14.3 Million US consumers paid for online content in Q4, 2002, up by 4.3 million of those who paid for content in the same quarter in 2001. Spending for Q4, 2002 was $361 million (Morrissey, 2003).

Genealogy is particularly popular in America, with the US Congress approving legislation to designate October as 'National Family History Month' (Powell, 2003). Visitors to the American genealogy sites tend to be older women, a demographic that holds much of America's disposable income (Godwin, 1999). In 1999 Rootsweb CEO Robert R. Tillman said 'We think our prospects are good over the long term. Guess what demographic the baby boomers are going into? And they tend to be much more computer literate than the generation that precedes them' (Godwin, 1999).

Spending Power of the South African Market
Ongoing research conducted by web research company Webchek on the average South African internet shopper shows the following:

- In 1999 13% more men than women bought online, in 2000 this gap decreased to 10% and in 2001 it went down to 8%
- Online shoppers are more likely to be English speaking
- They are more likely to have household incomes of R20 000 plus per month
- 26% of web users shopped online in 2001. (Webchek, 2002).

An interesting finding of the research is that the longer people stay online the more likely they are to purchase something, this is why 'sticky' sites, sites that keep their user's attention for a long period of time are popular with advertisers. This point will be discussed in more detail in Chapter Two.

The research above gives the most general impression of the South African Internet market, no research could be found on the size, spending power and internet adoption rates for the South African genealogy market. A central question in this research is – What will happen once people can access information about this project online? Will a new market arise? Until now the only internet advertisement for the project was a page on the publishers site where people could buy the books, but there has been no listing with search engines or genealogy web sites, and very little background information about the project available on the internet. Once people start finding information, what will the market response be? It is for this reason that a research questionnaire and hit counter software were placed on the British Settlers in Natal web site - they will provide hitherto unavailable information about the market.

Design of the Research Questionnaire

The research questionnaire is attached in Appendix B. The questionnaire was designed to determine where the market for the work was located, the format in which respondents preferred to purchase genealogical records (downloaded from the internet, in a book or both) and what the market attitude towards paying for genealogical records was. Some direct questions about the cost of a single record (the biography of a single settler) were included with the aim of determining the amount of money people were prepared to spend. Respondents were given the option of justifying their response (X Amount for a single record is too much/little because....) No questions were asked about the income of the respondents because it was deemed that this kind of question was too personal and a question about the perceived value of a record would be less intrusive and more likely to yield a response.

The Inclusion of Hit Counter Software

Automatic hit counter software was included on the home page of the web site in order to measure how many people visited the site, what domains they were registered as having (for example .co.za, .co.uk, .com - these provide some clue as to what

country the visitors come from) and what web site referred them to the BSN site. This provided valuable information about internet adoption amongst the market, both nationally and internationally and which other genealogy web sites were commonly visited by the market.

Why is Genealogy so popular?

The study of genealogy has become increasingly popular in recent years. A poll conducted by Maritz Marketing Research in 2000 reported the following about why Americans become interested in genealogy:

- Thirty-nine percent of respondents said that hearing stories from relatives about their family history sparked their interest.
- Nineteen percent said they became interested after talking to a friend, colleague or family member.
- Nine percent maintained that it was coming in contact with relatives they had never met that started the ball rolling for them.
- Five percent reported that attending a family reunion or family event triggered their interest (Maritz Poll, 2000).

The 2000 poll found that 60% of Americans said they were at least 'somewhat interested' in tracing their family history. A similar Maritz poll in 1995 found that 45% of Americans said they were at least 'somewhat involved' with genealogy. (Maritz Poll, 2000).

Of those who were 'somewhat interested' in genealogy ninety-one percent said they had discussed their family history with other family members, forty-nine percent said they had created a family tree, thirty-seven percent had travelled to an ancestral hometown or country, while the same percentage (thirty-seven) had written up their family history. Twenty-nine percent reported having used the internet to search for information about genealogy (Maritz Poll, 2000).

What is the importance of this research in the South African context? From the point of view of this project there is little significance as few of the Natal Settlers emigrated to America. However what this research does show us is how people interested in their families behave - they discuss the family history with other family members, they hold reunions, they build family trees and so forth. This behaviour is similar to that of the genealogical community in South Africa according to Mrs Spencer (Spencer, 2004). This knowledge of the behaviour of the market will be useful in tailoring the product to the needs of our users.

It is important to understand why online genealogy is popular in order to understand the market. What follows are further explanations for the rise in popularity. It could be that in an increasingly stressful and anonymous society people are unsure of their identities and thus begin to search for their roots. As Tom Stockhom, President and CEO of MyFamily.com said: 'We help customers answer the questions, "Who am I", "Where do I come from?" and "How am I connected?"' (MyFamily.com, 2003). Perhaps they are uncomfortable with the increasingly threatening present (9/11, the ongoing conflict in Iraq, AIDS, crime and so forth) and take refuge in the past.

This phenomenon may be connected to loneliness – genealogy provides a means of connecting with your family and other people who share your interests. Online genealogy is certainly an extremely sociable hobby. In 1999 the major genealogy sites boasted a huge number of message boards. FamilyHistory.com had 65 000, FamilySearch.org had 51 000 and Genealogy.com had 16 000 lists, one of which was sent to 350 000 people twice a week (Godwin, 1999). The fact that many online genealogists are searching for some kind of personal connection must be taken into account in any marketing initiative.

The rise of genetics - the scientific study of heredity - means that people may need to trace their family history to research inherited disorders. In South Africa another factor could be the resolution of land claims and the inclusion of the study of genealogy in school syllabi (Zollner, 2001). Furthermore people have to trace their ancestry in order to qualify for UK citizenship (for example to obtain a UK heritage visa one must prove that one's grandparents were born in the UK).

Market Attitudes

In the world of genealogy the idea of charging for information could be a sensitive one. For most genealogists their work is a hobby pursued in their spare time and they share information with correspondents in order to build a fuller picture of the past. Given this context where everything is shared, how will people feel about paying for information? Zollner mentions that genealogical knowledge is a highly emotive issue because the holder of the knowledge sometimes perceives him or herself as the sole owner thereof and does not want to share this knowledge with others (Zollner, 2001). These factors mean there might be some resistance to the idea of customers having to pay for information. Another reason for resistance could be that South Africa does not have large commercial genealogical sites like Rootsweb (one of the most popular American sites), so the idea of paying for genealogical information online does not have a precedent.

Ethical Issues

Another factor to consider here is the fact that Mrs Spencer's research was, on occasion, funded by public institutions like the University of Natal, the Human Sciences Research Council and the Natal Provincial Museums Services. Is it ethical then, for her to derive a profit from this research? A counter argument to this could be that everyone is entitled to a living wage and Mrs Spencer has devoted forty years of her life to a project that is in the public benefit, with very little financial reward. There are no easy answers to these questions; they will have to be considered carefully.

Conclusion

This chapter has provided an introduction to genealogy and then to the British Settlers in Natal project. After that the market for this project was discussed, with specific reference to its size, geographical location, rates of internet adoption and spending power. The attitudes of the market towards purchasing genealogical information and the reasons why genealogy has become so popular were also discussed. There is much information available about the American online genealogy market, but very little

about the South African market. For this reason a questionnaire and hit counter were placed on the BSN web site, so as to gather some information about the market for this product in particular.

Chapter 3. Market Strategy and Possible Business Models

Introduction

This chapter will consider a number of business models available to the product and attempt to find a model which will be commercially successful. The project's resources, key competencies and unique selling proposition will be considered in order to find an appropriate business model. Rayport and Jaworski's Market Opportunity Analysis will be applied to the project to understand what benefits, if any, would arise if the project were to adopt an e-commerce model (there is no point going the e-commerce route if there are no benefits to be derived from it) (Rayport and Jaworski, 2001). An investigation into the technology necessary to build an e-commerce site is also undertaken. At the end of the chapter possible business models are discussed and two suggestions for possibly lucrative models are made.

The Unique Selling Proposition of this Project

Conventionally, to research families people either employ a researcher, exchange information online or do the research themselves. Doing the research on one's own is inconvenient if one does not live in the area or are unfamiliar with the resources at one's disposal. There are many records available in the local archives for example, but how does one find one's way through that mass of information to extract information solely about one's own family? If the researcher does not live in KwaZulu-Natal he or she incurs transport and accommodation costs and then has to work their way around the various libraries, government and church archives, private collections and cemeteries, with perhaps a visit to the original family farm or homestead (if they can gain access to them). Strangers to the area may find it very difficult to know where to start and how to gain access to these various sources.

Employing a local researcher could be costly, but this is the best alternative to doing the work oneself. However as Zollner noted, family research is so time-consuming that this can be very expensive (Zollner, 2001). For all the reasons mentioned above

Spencer's register offers researchers many benefits, she is an acknowledged expert in her field and is able to add value by making connections between clues she has picked up in her 40 years of research. Something which may seem irrelevant to a less experienced researcher could take on a different meaning with her – she could remember having seen that name or place before and be more likely to provide a fuller picture of settler history. Spencer has already gathered primary information about the settlers (during the 1960s Spencer was given Human Sciences Resource Council funding to employ students to collect primary research from archives and by recording the gravestone information from cemeteries). In history primary information is that found in original artefacts - diaries, letters, newspapers and so forth, whereas secondary information is books and commentary about the primary sources.

Zollner remarked that 'time is working against the genealogist' (Ibid), and this is especially true in South Africa - the elements erase details on gravestones, and the heat ages paper rapidly. However the fact that Spencer gathered information from all the primary sources forty years ago means she avoided this problem. Researchers following in her footsteps may find this information no longer exists. Hence the project's unique selling proposition is that Spencer can supply high quality information rapidly (she has already written the biographies for all the settlers whose surnames run from A to G), and that she has at her disposal a range of primary data, which may no longer exist.

Market Opportunity Analysis

It is instructive to apply the Market Opportunity Analysis Framework developed by Rayport and Jaworski to this business proposal to understand what benefits, if any, will arise. The Market Opportunity Analysis is a tool for those who plan to launch a new business. It helps the entrepreneur think through the conditions that define opportunity attractiveness. The framework consists of five main investigative stages and a final go/no go decision.

Rayport and Jaworski maintain that there are five conditions that firms should satisfy in order to frame the market opportunity. When these conditions are taken together they form the scope of a sound market opportunity analysis.

The conditions are as follows:

- Condition 1 - Seed opportunity in an existing or new value system
- Condition 2 – Uncover an opportunity nucleus, an unmet or underserved need
- Condition 3 – Identify and choose priority customer segments
- Condition 4 – Declare the company's resource-based opportunity for advantage
- Condition 5 – Assess competitive, technological and financial opportunity attractiveness

Condition 1 – Seed opportunity in an existing or new value system.

Rayport and Jaworski define a value system as 'a chain of suppliers, distributors, competitors, buyers and intermediaries that bring an existing offering to market' (Rayport and Jaworski, 2001). The question here is: How can the BSN value system be transformed? Perhaps by bringing the product to market through a different channel and in a different form – individual records sold online, as opposed to a whole book.Or the system could be transformed by advertising a product where it has not been advertised before, thereby exposing it to a different market and more traffic.

Condition 2 – Uncover opportunity nucleus.

This stage revolves around uncovering unmet or underserved needs. The question here is what can be fixed, even if people do not know it is broken? Presenting the records online provides a more convenient way to access them. Marketing the product online means one can reach a new market.

Condition 3 – Identify target customers.

It is important to identify the potentially attractive customers the company would like to serve. This rough appraisal of customers is essential in shaping the business concept and in estimating the size of the opportunity. To identify the target customers certain questions need to be asked:

Who are these customers?

The bulk of the customers are white English-speaking KwaZulu-Natal residents, followed by residents in the rest of South Africa, then United Kingdom residents and finally researchers from the rest of the world.

What makes them attractive customers?

With international customers the exchange rate is obviously a bonus, as well as the fact that it is inconvenient to carry out research in South Africa. At the moment South Africans who use the internet are wealthy, given the research about who uses the internet in South Africa (Webchek, 2002). However this statistic will probably change as internet penetration spreads and increasing numbers of South Africans gain access to the internet through internet computers in libraries, schools, tertiary education, the workplace and cyber cafes (Spencer, S. 2004). This usership may not be as wealthy as the original internet users however.

What experiences do they seek?

They want to find out about their ancestors and the history of early British colonialism in Natal, they could also seek connection with other like-minded people

What should the company offer customers?

The answer to this question will become clearer once the research results have been considered. What the project could offer them is

convenience, connection with fellow researchers and information about their ancestors.

What barriers would the company need to overcome to get these customers to buy the offering?

The customers may have reservations about buying online so it is important to advertise a privacy policy clearly and ensure excellent security on the web site. The researchers may also seek teaser information about their ancestor - not the complete record, but enough information for them to know whether they are looking at the correct person. A significant obstacle, which came through, clearly from the questions and comments from the web site is that researchers expect the information to be freely available. Many requests to be sent individual records free of charge have been received.

Condition 4 – Declare the company's resource-based opportunity.

What capabilities and opportunities does the company have that will allow it to achieve advantage through it's own resources and those of potential partners? The most distinct resource is Spencer's reputation and experience. Cyndi Howells, creator of Cyndi's List, a very popular American genealogy web site notes that 'finding data online does not mean that it is correct, thoroughly researched or well documented' (Howells, 2004). Martin Zollner writes that the volume of available genealogical information has increased a great deal over time, but there remain 'serious deficiencies which need to be rectified' (Zollner, 2001). He speaks of information being 'collected, exploited, stored and processed uncoordinated on individual and organizational levels' (Ibid). Zollner also mentions long-standing errors in South African genealogy which have simply been repeated in new research because corrections are 'often distrusted or not readily available. Considerable time and energy that could be harnessed for general genealogical activities is lost' (Ibid). Knowing that your sources are of a high quality is very important in genealogy, thus Spencer's reputation is a considerable advantage.

Another resource is the collaboration with the University of Natal Press. This collaboration offers several advantages – the stringent proofreading and editing ensures quality control; they provide both a bricks-and-mortar and online outlet and their reputation adds authority to the work.

Condition 5 – Assess Opportunity Attractiveness

The company must consider the situation of the markets – financially, technologically and in terms of competition. The technological assessment considers issues such as whether the existing technology will allow the business to meet its goals. Products like MS FrontPage and Word and free online newsletter, hit counter, search and bulletin board software make running a site that merely advertises the product and provides some background information about it relatively easy. The University of Natal Press sells the books through their web site (www.unp.co.za) at the moment, which means they have taken responsibility for the entire e-commerce side of the business. However if an attempt was made to develop more complex e-commerce models more sophisticated technology would be needed, and the e-commerce functionality may have to be moved back to the BSN web site. An exploration of e-commerce business models available can be found in the next section.

The assessment of the competition considers underserved customer needs and the strength of any competing enterprises. There are no other enterprises that compete directly with this project in terms of content. There are other South African genealogy web sites, but none of them cover this field.

Financial Assessment

The financial assessment refers to segment size, growth rates, profitability and other performance criteria. As has been mentioned before, genealogy is not a profitable enterprise. The question of attracting repeat customers arises here. Once a person finds information about their family why would they come

back? It seems more likely that the site will generate profit through carrying advertising than through direct sales. For this reason an evaluation of possible business models is embarked upon below.

Proposed new business model(s)

Lawrence, in *Technology of Internet Business*, mention a number of different business models that could be adopted:

1.) The Advertising Supported Model

The site gains its revenue through the sale of advertising.
The reason why American genealogy sites are popular for this is their 'stickiness' – a valued quality on the Internet. 'The longer a site has a user's attention, the better the chance that the user will consolidate all online activities, including purchasing, on that site' (Godwin, 1999). In June 1999 a Nielsen NetRatings poll found that the average visitor to Rootsweb (www.rootsweb.com) spent 41 minutes on the site that month. Visitors to Ancestry.com and FamilySearch.org spent an average of 34 minutes there that month. In the same month the average Internet user spent only 22 minutes on email (considered the most time-consuming online activity) (Neilsen NetRatings 1999, cited in Godwin, 1999).

The fact that genealogy sites are sticky may mean the British Settlers in Natal site could earn revenue by hosting advertisements and promotions.

Other genealogy sites, like the very popular Cyndi's List (www.cyndislist.com) promote genealogy software online. This software helps researchers compile and display information about families. Webchek (a South African Internet market research company) reported in its 2002 Newsbrief that software was the third most popular product bought online in 2001 (Webchek, 2002). Hence the British Settlers in Natal site could perhaps attract revenue through advertising genealogy software on its site.

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2.) Web Portals

Web Portals are intended to serve as central points on the web for users. An example of this phenomenon would be Yahoo! The portals also make their revenue by selling advertising and provide value added services like free email.

Adding bulletin board, mailing list and site hosting functionality to the BSN site would promote the use of the site as a hub - allowing the ancestors of various descendants to host their family web sites from it, or just to post messages on a bulletin board. All these strategies would increase site stickiness and therefore be attractive to advertisers.

Rayport and Jaworski point out that consumer behaviour is still in the early stages of being defined, thus it is easier to influence (Rayport and Jaworski, 2001). In the South African context there are only a handful of genealogy web sites, thus it would be quite easy to set a new trend. Furthermore in the new economy customers are not aware of the potential functions of a product. An example of this is Napster – a completely new way to acquire music. It is up to the new economy companies to listen to customers and find out what the opportunities are, even if the customers do not ask for them. Perhaps this kind of model would be very popular to South African genealogists, and not just those researching Natal settlers but also any researcher looking at the history of any South African family.

3.) Online Subscription Model

Information providers like journal publishers often adopt a model where customers pay a subscription fee in order to access online information. Many of the big American genealogy sites sell subscription-based access to databases; this is a variation on selling individual records online (see model 6) and may be useful to libraries, genealogical institutions and other `bulk users'

of the product. However this model has similar implications to those of model six and must be considered just as carefully.

4.) Online Fee for Service Model

Institutions like universities allow students to enrol and study with them online. This means that services can be delivered to any physical location that has internet access.

5.) Online Fee for Transaction Model

Travel Agents, Banks and Stockbrokers sometimes employ this model. The companies provide transaction-based services like registration bookings or banking services online for which customers pay a one-off fee.

6.) Virtual Storefront Model

This is a web site that provides customers with a full range of information, customer support and online transactional capabilities (i.e. browsing, ordering and payment). There are three variations on this model. The first is to sell software to help amateurs create their family tree, as some of the American genealogy sites do. A second option is to sell copies of the book online; a variation on this option is already in place. At the moment the BSN project site is just 'brochureware'. Brochureware is defined by Strauss and Frost as '[S]ites that inform customers about products or services without providing interactive features. They are the equivalent of a PR product brochure placed online (Strauss and Frost, 1999). Customers read about the product on the BSN site and if they want to purchase a copy of the book they click on the link to the University of Natal Press site.

Sections of the market may actually prefer to buy records in book version, even though this takes longer than simply downloading a record online. Reasons for this could be that researchers may value their family records

highly and want to show them to friends and other family members. Thus they might prefer them in a 'classier' book format as opposed to some A4 pages stapled together. It is easy to mislay paper records, and for them to become dog-eared and grubby. A book however, is more durable and easier to locate. Large retailing sites like Amazon.com have ensured that both international and local consumers are very used to buying books online. Webchek reported that books were the item most frequently purchased online (Webchek, 2002). Thus there is a clear precedent for consumers to buy books online.

The third option is to sell individual records online. People interested in the history of their ancestors could download information about that settler at a certain cost. This would prevent researchers having to pay for the records of all the other settlers in order to obtain a single record (for example, at the moment a researcher into the Guy family would have to buy the whole of volume 7, thus acquiring unwanted knowledge about Gadney, Gardiner, Gibson and all the other settlers whose surnames started with G). In order to implement this model the tasks that would have to be performed are:

Retrospective conversion

The records for the first few volumes were captured during the 1980s; they were typed into an Osborne computer. Osbornes are no longer compatible with the computers of today which means the original books would have to be scanned page by page. The resulting records would have to be carefully checked for errors before they could go online. This would give rise to an increase in costs because the data capturer would have to be hired and a scanner acquired. It would also result in increased time demands on Mrs Spencer because she would have to check the final copy.

Creation of a Content Management System

The web site would need a much more sophisticated database, which would allow users to search for records. The site would perhaps need a content management system to update content speedily. According to

Tauber and Kienan a content management system will work with the database where your information is stored. It 'usually provides tools for team workflow and version control as well as for facilitating syndication or sharing content with strategic partners and licencees' (Tauber and Kienan, 2001). This system would facilitate work flow management – for example a data capturer would capture information and would notify a proof-reader, once the proof-reader had checked the content Mrs Spencer would be notified. Once Mrs Spencer approves the copy it would go to her editor who would do a final read-through and then publish the content to the internet.

The introduction of a content management system would result in increased costs because of licensing fees or web site development costs. Staff would also have to connect to the internet to update the records, which results in telephone costs. Furthermore in order to ensure quality it would be necessary to purchase a second server. The first server would be 'live'; it would broadcast information that the public could see on the internet. The second server would be offline, all the data would be captured to this server and once the editor had performed a final check on the copy he or she would publish the data to the live site, hence performing a quality control function.

There are three options for building the content management system that might meet the projects needs. The author's experience as Webmaster for ETHEKWINI Online (www.durban.gov.za), the official web site for Durban, was drawn upon to design these models, as ETHEKWINI Online is about to move over to a content management system. The three options are as follows:

a.) The data capturer copies the records into MS Word or similar word processing feature. Once the records have been captured he or she mails them to the proofreader. The proofreader publishes them to an offline website. Mrs Spencer checks them on the offline web site and if

they are correct she notifies the editor. If the editor is happy with them he or she will publish them to the internet. The proofreader, Mrs Spencer and the editor would have to acquire a copy of web authoring software (MS FrontPage or Dreamweaver for example). This is not a real content management system, because there is no automation of the workflow. However it is a cheap version of the system that could suffice until the volume of records coming through became overwhelming.

b.) It is possible to bypass licensing fees by using Open Source software. Open Source software code is generally freely available, but this does not mean that users will not incur costs. The costs here come with paying a developer to create the content management system that is required. Furthermore there are many dangers in building a system from scratch - if it is not designed properly or badly written users can have endless problems further down the line.

c.) The third option is to buy an off-the-shelf content management system, with web publishing capabilities. This may be the best choice, but only if the software performs all the tasks required and the software has solid user support.

Thus any kind of content management system adopted will result in increased staff and technology costs. The positive side of a content management system is that if it works properly it can smooth and automate the workflow process and help to produce high quality content.

Further Site Development

As discussed, a second server would be necessary in order to create an offline web site. At the moment server space is rented from an Internet Service Provider. However with the great increase in the size and the complexity of the site (the new site would contain at least 2800

records, along with the software to deliver them to users) a web development company may have to be hired to maintain both servers. This would result in a great increase in the monthly cost of maintaining the web site.

The Creation of a Security Policy

To quote *Technology of Internet Business* 'All organizations engaged in internet commerce need a well-established, well-planned and well-written security policy' (Lawrence, 2002). The company hired to develop the site would have to develop this policy, in consultation with the managers of the BSN project. To develop this policy one needs to define the security requirements of the business, based on the threats to the competitive advantage and data of the company and consider what level of security is necessary. This policy will have to be developed in conjunction with the BSN project staff and the company which is managing the web site.

The Adoption of Security Technology

The company would also have to create an efficient firewall to protect the site from hackers. Firewalls are 'a set of related software programs located on a network server that provides a protective layer between the resources of a private network and users from other networks' (Lawrence, et al, 2002). The site would probably also have to employ the Secure Sockets Layer (SSL) and Hyper Text Transfer Protocol Secure (HTTPS) protocols (Ibid). The costs for the disaster management plan and the security policy would probably be added to the maintenance costs for the site.

Possibly an Improved E-commerce Facility

At the moment the University of Natal Press web site deals with the e-commerce side of the transaction. However a great increase in the amount of e-commerce traffic going through their server may be more than it could handle. Furthermore it might be difficult to conduct an e-

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commerce transaction over two sites - the purchase would be made on one site and the transaction would be processed on another. It would be better to conduct the whole transaction on one site.

In order for this to happen a secure section of the site would be needed to deal with online payments. Agreements with banks would need to be in place, and encryption software would have to be bought. Lynn Ward, in her article 'Hidden Costs of Building an E-Commerce Site' details the following costs of building an e-commerce site. If you are selling a product you must have a merchant account to process customer credit cards. These charges include setup costs, monthly charges and per transaction costs (Ward, 2003). If an e-commerce site accepts credit card information security protocols must be employed. These protocols encrypt confidential data and reassure users that this information is safe. A company like Verisign sells security packages with different options and varying levels of information for e-commerce web sites (Ibid).

The Recruitment of More Staff
More staff would be needed initially to perform the retrospective conversion. Technical staff will be needed to maintain the web site. The site will also attract other costs like marketing and maintenance (for example server upgrades and improvements to the site). Another cost is that related to keeping content fresh – if users know that the content on a site is unlikely to change what would spark their interest to return? (Ibid).

Implications of Selling Records Online
Selling individual records online will involve a great increase of technical expenditure as well as increased fixed costs (monthly server rental and maintenance for example). It will also result in increased staff costs and an increased amount of time required from Mrs Spencer to check that the published records are correct. A decision can only be

made to sell records online if it is absolutely clear that all the initial and ongoing costs can be recovered.

7.) Electronic Malls

These are third party hosted groups of virtual storefronts; an electronic version of a bricks and mortar shopping center (Lawrence, 2002). The results of the online questionnaire administered (see Appendix B) indicate that the bulk of respondents prefer to download records online. However at least three quarters of respondents also believe that they should only pay a vendor R10 per record. One or two respondents indicated they were prepared to pay R30 per record because that was an appropriate price, but they were in the minority. It seems that the market is receptive to the convenience of downloading records online but averse to paying the cost involved with these downloads. This conclusion is supported by the fact that many queries have been received from visitors to the site asking to be sent records without charge.

If there is a minimum of 270 000 descendants, who may or may not be interested in their heritage, and if they are only prepared to pay R10 for an individual record, then it is doubtful that the project will generate enough money to cover it's own start-up costs. It is not even clear that a cost of R30 per record would cover the costs of the project, however the distinction between R10 and R30 was made to gauge the market's attitude towards paying for records. Furthermore, once a descendant has found his or her family history, why would that person return to the site and spend more money? Perhaps once the online selling model will work once it is established, but is it worth risking the establishment costs to make that discovery? Hence it is doubtful that selling records online will prove to be a lucrative business model.

If selling records online will not be successful, what will? At the moment the site is quite basic, one step up from brochureware, in that apart from advertising the product customers are able to buy it as well. Many of the other models available to the project are variations of the model of selling records

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online - subscriptions and fees for services for example. It seems that the most successful model available then, would be to sell advertising online.

A variation on the advertising model would be to create an electronic portal. If a web site could become a hub for South African genealogy activities - providing bulletin boards, mailing lists and site hosting functionality - as well as a family reunion portal - this may create enough traffic to draw substantial advertising revenue. A good example of site hosting functionality can be seen on Rootsweb - families and organizations can set up sub sites on Rootsweb free of charge. A family reunion portal would function in a similar way to a wedding portal, it would be a 'one stop shop' for all activities involved planning an event, in this case a family gathering. As Zollner remarked, the number of family organizations in this country are increasing (Zollner, 2001) and with that the number of family reunions that take place. Companies in the fields of accommodation and catering, that provide related services to family reunions, could advertise their services on the site, as well as hotels and conference centers.

This portal would link to all the existing South African genealogy sites, including the BSN project and encourage genealogists to place their sites on the portal. This idea draws on the strategic advantage of eBay, where the company does not have to merge online and offline capabilities, but can merely unite buyers and sellers in an online forum. In this model the emphasis is no longer solely on the BSN web site, but sees this site as part of a broader collection of sites.

Conclusion to the Business Model Discussion

There are a wide range of business models that could be adopted and the decision about the one which is most appropriate depends on a number of factors - the financial resources available to the project and the attitudes of the market in particular. It is important to match the option chosen with the resources of the project or facilities will become overstretched. Due to poor market response any model related to selling

records online was rejected in favour of selling advertising online, or variations upon that theme, like creating a South African family web portal, which has links to various family history sites.

Conclusion

This chapter began by considering the unique selling proposition for the BSN project, were it to go online. After that Rayport and Jaworski's Market Opportunity Analysis was applied to the project in order to identify what benefits, if any, would be gained if the project were expand into e-commerce. It is doubtful that selling records online will generate sufficient income to cover the costs involved. Perhaps the most successful business model will be that of a web portal that forms the nucleus for a number of family history sites, among them the British Settlers in Natal Project.

Chapter 4. Best Practice in Building an E-Commerce Web Site

Introduction

This chapter will consider the best practices to follow, firstly when building any web site, and then particularly in reference to an E-Commerce site. The advent of Hyper Text Markup Language (HTML) authoring tools like FrontPage and Dreamweaver has made it easy for the average person to build a web site. Building a user-friendly web site is quite a different matter however; there are a number of best practices to be followed, which include ensuring the site is easy to use, ensuring that it can be found by search engines, ensuring the site has a powerful search function to help users find the information they need and collecting a range of information about the how the site is used in order to improve service delivery.

The second part of the chapter will examine best practice in building an e-commerce web site. This involves not only including all the best practices of building a normal web site, but also specific practices related to e-commerce, for example ensuring that your site can accept payments in foreign currencies, ensuring that your privacy policy is clearly displayed and taking a number of security precautions to prevent online fraud from happening on your site The best practices discussed in both the first and the second sections of the chapter will then be compared to the current business model of the site and the proposed future business models.

What is Benchmarking?

The Merriam Webster Online Dictionary defines benchmarking as 'the study of a competitor's product or business practices in order to improve the performance of one's own company' (Merriam Webster, 2004). Stauffer maintains that when executed properly benchmarking can 'reveal gaps between the performance of the benchmarker and the performance of a benchmarked "best practices" leader, *and often suggests the*

means by which the benchmarker might close those gaps' [Author's italics] (Stauffer, 2003).

Usability

What is usability? The American Cancer Institute maintains an informative web site about how to communicate the results of cancer research on the internet. On this site usability is defined as 'the measure of the quality of a user's experience when interacting with a product or system' (National Cancer Institute, 2004).

The article goes on to define usability as a 'combination of factors that affect the user's experience with the product or system, ' (Ibid). These factors include:

- Ease of learning - How quickly can a first time user learn to accomplish basic tasks?
- Efficiency of use - How quickly can a user who is experienced with the system accomplish tasks?
- Memorability – If one has used the system before is it easy to remember how to use it again?
- Error frequency and severity – How often does one make errors while using the system, how serious are these errors, and how does one recover from these errors?
- Subjective satisfaction - How much does the user like using the system? (Ibid).

When considering best practice for web sites one must consider usability theory because it attempts to set benchmarks for the creation of a successful site. One of the main lessons in usability theory is that users do not want to reinvent the wheel; they want to apply commonly held principles to every site and not have to continually start afresh when it comes to questions like – 'what does a link look like?'

Why is usability important?

Jakob Nielsen, one of the foremost usability experts, reports that across many test tasks 'users fail 35% of the time when using web sites' (Nielsen, 2003). He goes on to say 'user interface designers rarely employ systematic quality engineering methods. We have much to learn from manufacturing companies' more disciplined approach to quality' (Ibid).

Nielsen reports on quality measurements conducted across a range of recent projects which tested usability on 139 web sites. The table below shows the average user success rate on seven tasks (Ibid).

Table 2. Average User Success Rate on Seven Tasks

User Tasks	Success Rate
Using web-based applications	45%
Shopping on e-commerce sites	56%
Finding company locations	63%
Using 'About Us' information	70%
Using the Investor Relations area	70%
Using the PR area	73%
Subscribing to email newsletters	78%
Average success rate	**65%**

What is the implication of these findings? The company web site is becoming in many cases the main interface with the customer. Thus having a site that is difficult to use is, in Nielsen's words, like 'having a store that is on the 17th floor of a building (so nobody can find it), is only open on Wednesdays between 3 and 4 o'clock (so nobody can get in) and has nothing but grumpy salespeople who won't talk to customers (so people won't buy too much) (Nielsen, 2000).

Nielsen's point is well taken and many usability theories and practices were incorporated into the design of the existing BSN site because they are considered best practice.

What are the characteristics of a usable web site?

Nielsen in his book *Designing Web Usability* lists a number of factors that contribute to building a usable web site. Some of the main factors are:

- Fast download times

  'Users need response times of less than one second when moving from one page to another if they are to navigate freely through an information space' (Nielsen, 2000). One of the ways to ensure this is to use small images which download quickly; big images take up a good deal of memory and consequently slow down the site's loading time, therefore it is best to use small, well chosen images which attract the user's attention but load quickly.

- Accessibility from a variety of systems

  Web sites should be designed for all screen resolutions (screen resolution refers to number of pixels displayed on a screen). Some users have big screens, some users have small screens, therefore designers should create resolution independent pages which adapt to whatever screen size they are displayed upon (Ibid).

- Accessible to the visually impaired

  The most serious accessibility problems on the web, because it is such a visual medium, relate to blind users and users who are visually impaired. A designer must avoid the use of certain colours which cannot be seen by people who are colour blind, and must avoid the use of similar colours on top of one another do not provide enough contrast for visually impaired users to see them properly (Nielsen, 2000).

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Another convention which helps the visually impaired is to attach alt text labels to all images. These tags 'describe' the image to the visually impaired users that use software called site readers which convert the text on the page into electronically generated speech - these machines will read the alt tags to the listener, saying 'Picture of Durban drawn in 1852 showing the view from the Berea down to the Bay', or whatever text is placed in the alt tag.

- No Frames

  Web designers use frames to ensure certain elements of a site remain constant. A left hand navigation bar (a group of navigation options on the left hand side of the page) for instance, could be placed in a frame. This would ensure that it appeared on every page. Nielsen's recommendation when it comes to frames is: 'Frames: Just say no'. His reason? Frames mean that the users view of information on a screen is now determined by a 'sequence of navigation actions rather than a single action' (Ibid). Rosenfeld and Morville perhaps state the argument better when they say 'the web is built on a model of pages, with each page having a unique address or Uniform Resource Locator (URL). Users are familiar with the concept of pages. Frames confuse this issue by slicing up pages into independent panes of content' (Rosenfeld and Morville, 2002).

  Other consequences of using frames that Nielsen mentions are:
  - URLs stop working with frames. The address shown in the address bar does not constitute a complete specification of what is shown in the browser window.
  - Many browsers cannot print framed pages properly
  - Search Engines have trouble with frames because they do not know 'what composites of frames to include as navigation units in their index' (Ibid). This means it is harder for a search engine to spider a framed site – a designer then has to put keywords and meta-tags in all the frames, not one.

- Links must be easily recognizable as links

  The convention on many sites is that unvisited links are blue and underlined, and visited links are purple and underlined. It is best to follow this convention because then it is easy for visitors to understand your site, as Nielsen says 'when non-standard link colours are used users lose the ability to clearly see which parts of the site they have already visited and which parts remain to be explored' (Ibid).

- A Helpful Navigation Interface

  Navigational interfaces must help users answer the three fundamental questions of navigation around a web site:
  - Where am I?
  - Where have I been?
  - Where can I go? (Ibid).

  Any navigation structure created must continually provide this information to users - 'all pages must make it clear where they fit in the larger scheme of the site' (Ibid).

Search function

Another element of a highly usable site is one that has an excellent search function. Rosenfeld and Morville make the point that not all sites need a search function, some of them are so small that they are very easy to navigate without one (Rosenfeld and Morville, 2002). However because of the volume of information on genealogy sites (especially all the surnames) a search function is an important component. As Nielsen points out some users find information through searching; others find it through following links and some either search or use links (Nielsen, 2000). It is important to cater for all these kinds of users. It is also important to use a search function that is easy to understand.

Displaying Search Results
- According to Nielsen the search results page should be organised in the following way in order to ensure usability:

- o It should provide a sorted list of hits with the best hits at the top
- o Duplicate occurrences of the same page should be eliminated
- o Search systems should recognise quality as well as relevance when prioritizing search hits (Ibid).

FreeFind (www.freefind.com) is one of the better free search software packages available and has been used on the BSN web site. Apart from the features mentioned above FreeFind has these additional features:

- It shows the search term in the context of a sentence - this helps users to see whether the retrieved document is what they were looking for.
- It gives the site administrator a weekly report showing what terms people have searched for. This is important because the site manager can see:
  - What users cannot find using the navigation bars
  - The most frequent search queries
  - Topics users are searching for that are not currently on the site.

FreeFind can be used to build a site map - the software is capable of taking the information it has about the site and using it to build a site map (a map that shows users the basic structure of the site). This is good because it caters for users who prefer to browse for information instead of searching for it directly.

Best practice in site reporting software

Because the design is to be based on user needs, data must be collected about those needs and how well an existing web site (if there is one) is meeting those needs. One of the ways to collect that data is system metrics [log data on an existing site] (National Cancer Institute, 2004). There are a range of metrics one can gather from a web site. Tauber and Kienan point out that the metrics you measure should be determined by the goals you have for your site (Tauber and Kienan, 2001). For the goals of the BSN site (promoting, informing and selling) metrics like site traffic,

number of users, length of user sessions, sales generated and number of buyers should be measured (Ibid).

According to the author's experience as Webmaster for ETHEKWINI Online, the official web site of the city of Durban, site-reporting software to measure these metrics should provide the following information:

- Hits
- Page Views
- Unique Visitors
- It should show user activity in a time graph so you can see the time of day or day of the week when the site was most popular - this information is used by the technical staff to monitor demands on the server.
- The visitor's domain (for example .co.za, .com, .co.uk). This gives you a general idea of what country the visitor is from, however it is not completely reliable as some South African service providers have .com domains (iafrica.com for example).
- Visitors that have come to your site from a link on another site and what that link was.
- The browser software your visitors use
- Your visitors screen resolution
- The language your visitors speak (according to the preferences set in their browsers)
- The kind of operating system they use.
- What page users enter the site through
- What page they leave the site from
- How they move through the site
- How long they stay on each page (stickiness).

Search Engine Optimization (SEO)

This refers to the practice of ensuring your site can be found by search engines. This practice is just as important as making sure your site is usable. because there is no point having a user-friendly site that no one visits.

Danny Sullivan of Search Engine Watch (www.searchenginewatch.com) explains that most search engines have three components – a spider (also known as a crawler or a bot), ranking software and the search function interface. The spider is a computer that 'crawls' over hundreds of web sites every day, it gathers information from the site like the titles of the pages and the keywords assigned to the pages (it is possible to assign a title, keywords and a page description to every page in html, this information will not display on the page, but you can see it if you view the HTML code for that page). The spider reads the text on the page and sometimes also checks to see which other sites link to that page (Sullivan, 2004).

When a searcher enters a search term into the search engine the ranking software creates a list of sites that contain the terms searched for. These sites will be ordered according to their relevance – the most relevant sites will come up first and the least relevant last. How is this relevance determined? The ranking software uses a set of algorithms that sort through the results and allocate relevance according to certain criteria – if a phrase appears in the page text and the keywords for example, the site might be rated more relevant as a site that does not contain phrases in the copy and the keywords. The ranking software will display the search results to the user (Ibid).

In order to ensure that a site is first spidered and then accorded a high relevancy rating the site author needs to make sure that each page of the site has been assigned HTML tags that the search engines can find, and also that the site has been submitted to the search engines in the first place. Many search engines have a 'Submit your Site' link where you can add the details of your site so that their spider will visit it. Jill Whalen, widely considered to be a SEO specialist and author of the site www.HighRankings.com, made the following points about best practices to ensure that your site is given a high relevancy rating by the search engines:

- *Choose keywords carefully*
  There are sites available to help you find the keywords that people search for most. The keywords that you might think are right for your site may not be the ones that people search for. The sites (an example is one called Wordtracker – www.wordtracker.com) will tell you which keywords

people search for most. You must choose two or three commonly searched for phrases for each page of your site.

- *On each page place at least 200-250 words of copy relating to your keywords.*
  This is very important as the search engines need to spider keyword-rich text on your pages for them to successfully classify your site.

- *Create an excellent title tag*
  Hyper Text Markup Language (HTML) title tags are accorded much emphasis by all the search engines. These tags are embedded within the HTML code of each page. It is important to put one's keywords in this tag and not fill it with unnecessary words.

- *Craft Meta Description tags carefully*
  Meta Description tags are also embedded within the HTML code of every page. These tags must use your keywords and also describe your site. The information in this tag often appears under your title in the search engine results pages so it is very important that they display correctly as this is the first impression potential visitors get of your site.

- *Be careful when submitting a site to search engines*
  It is important that you submit the correct keywords and site description to search engines because if you choose the incorrect terms to describe your site it will be difficult to change those details later.

- *Don't make many small changes to your site in order to get better results*
  Leave your site as it is for three to six months after you have first submitted it to search engines. It can take the search engines that amount of time to spider your pages (Whalen. 2003).

Conclusion to the discussion of best practices when building a web site

Thus when discussing best practice in building a web site one must incorporate all the practices set out above - the site must meet usability criteria, it must be optimised so that it will be picked up by search engines, it must have good web reporting software and a good search function. If the site does not meet these basic criteria visitors will not be able to use it properly, they will be unable to complete basic tasks like find information, and it is likely they will get frustrated and leave, as Nielsen pointed out.

Benchmarking the current business model against the best practices discussed above

The BSN site comes up in the first page of results for Natal Settlers on many search engines. It has site reporting software from FreeHitCounters (www.freehitcounters.com) and search software from FreeFind (www.freefind.com). These may not be the best kinds of reporting and search software available, but they are free and seem to serve their purpose well enough. Most of the rules of usability have been followed, as regards navigation, link style, adapting the site for the visually impaired and keeping download time as low as possible. There are improvements that could be made to the site in light of the points above, for example the site uses frames, but to build a site without frames is beyond the site creator's skills, thus necessitating the employment of web development consultants. In light of the fact that the site is merely an exploration of e-commerce at the moment, incurring this kind of cost is not desirable.

Benchmarking the possible future business models against the Best Practices discussed above

If an advertising related business model, or a web portal, were adopted the web site would have to be re-built by a web development specialist in order to make it more usable. There are some key usability practices which have not been possible to follow due to lack of resources, but the greater traffic to the site, along with the demand for

more sophisticated layout, which permits the inclusion of adverts, would necessitate a complete re-design to ensure the site follows all the best practices set out above.

Conclusion

There are many best practices to be followed when building a web site. A site needs a good search tool, good site measurement tools and should be built to ensure that it is accessible. The findings of the usability theorists, for example, Jakob Nielsen are very useful in determining the correct practices to follow when building an efficient web site.

E-commerce best practice

Introduction

In addition to meeting all the technical requirements for building a good site e-commerce sites must meet another set of criteria relating specifically to online commerce in order to be considered examples of best practice. These practices will be outlined below.

Philip Bannister discusses best practices which will 'have a meaningful impact on the bottom line and improve customer satisfaction and brand image' (Bannister, 2002). The practices are as follows:

- Go to the buyers - make sure your site features prominently in search engines and e-commerce brokers like AOL, MSN and Yahoo!

- Optimize home page design - Identify the products you want to sell and place them (or links to them) prominently on your home page so visitors can easily find them

- Content partnerships - If your site carries excellent and objective content you can gain user trust, build customer relationships, encourage repeat

visits and increase your revenue. If necessary partner with other businesses to provide good content, for example if your site sells cooking supplies and there is a cooking school in your area partner with them to provide recipes online and share customers.

- Persistent shopping cart - If a customer places an item in their shopping cart and then logs off, make sure that that item is still there when they log back in again. A South African example of this is the Musica and Kalahari websites - Kalahari keeps the item there for you, while Musica does not.

- Strong supporting images and content - Visitors are unable to inspect the product online so they need extensive information in order to make the purchase decision.

- Promote online and offline synergies - Cross branding, inventory management and customer focused pick-up and return policies promote trust and an excellent customer service experience.

- Excellent store locator - Make it very easy for customers to find your stores

- Excellent search engine capabilities - Help users find what they want on your site.

- Clear customer support options - Different customers prefer different ways to interact with suppliers. It is important to support all these options - FAQ's, email, phone, fax, real-time online support and offline store support.

- Strong and relevant cross selling - Pool associated products and make cross sale suggestions to customers. (Bannister, 2002).

However e-commerce companies transact globally as well as locally. This gives rise to a new set of best practice requirements. Gutzman mentions the following criteria companies should meet to compete in both arenas:

- Publish shipping policies up front - make it very clear which countries you ship to and how much this will cost
- Modify the site to handle international billing and shipping addresses - don't create forms that only accept the postal codes of your country for example
- Make customer service accessible globally - customers outside of South Africa may not be able to use 0800 numbers
- Modify your site to accept different currencies - allow customers to see prices in their own currency.
- Show all taxes, shipping and tariffs at checkout - don't surprise your customer with hidden costs at a later stage
- Use local logistics companies for returns - it could be expensive for customers to return goods to you if you are located in another country. (Gutzman, 2001).

Building an e-commerce community

Keith Regan in his article 'Building an e-commerce community: friendship sells' notes that it is widely held amongst e-commerce analysts that sites which attract users into a community reap financial rewards (Regan, 2002). He quotes recent studies by McKinsey and Jupiter Media Metrix which report that at some sites regular users of bulletin boards and feedback areas are responsible for two-thirds of sales, although they are only a third of all the sites visitors (Ibid). Regan also quotes a report from Forrester Research which has similar findings, in particular that 94% of the sites surveyed which have community features report that these features increase repeat traffic and generate nearly one quarter of all site traffic - without requiring significant advertising or marketing costs (Ibid).

Benchmarking the current British Settlers in Natal business model against the Best Practices discussed above

The current business model contains few of the elements discussed above. It does not provide bulletin boards or other features to promote online communities, it does not promote on and offline synergies. The e-commerce section is not even located on the BSN site, but on the University Press site. This site does have a persistent shopping cart however, and does display shipping charges up front. What these differences outline is that the current business model is so small that it is a long way from providing services like 'excellent store locators'.

Benchmarking the proposed future business models against the Best Practices discussed above

If the advertising or web portal model were adopted many of the features mentioned above would have to be adopted in order to ensure the site was highly competitive. However if the 'South African Family' web portal was created it is doubtful whether it would need to have a great emphasis on catering for international customers because it would be catering for a local market.

Conclusion

Once again there are a range of best practices to follow when constructing an E-Commerce site. Many of these revolve around organising the logistics of the business. Regan reports that e-commerce sites which create a community amongst their users are particularly successful. There are also features, like including a strong search tool, which are featured in the first section of this chapter as general best practices for building a web site.

Chapter 5 - Two examples of best practice web sites

Introduction

It will be instructive to benchmark the current and proposed business models against major sites in e-commerce and genealogy in order to both determine a suitable business model and to gain valuable information about best practice for an e-commerce web site. We will look at two web sites in particular here. The first - eBay - is a good example of both a successful e-commerce web site as well as a successful information-selling site. When considering an online business model for the British Settlers in Natal Project there are a number of options available; one being information selling - selling the individual records online (this model will be difficult to derive profit from however) - and another being to function solely as the most basic type of e-commerce web site - advertising and retailing a product online. Thus looking at eBay provides more information about the elements required to achieve success with either option. The second site to be studied is Rootsweb (www.rootsweb.com). This site is considered one of the most successful genealogy web sites and close scrutiny of this site might provide useful information which can be applied to the BSN project.

eBay

What is eBay?

eBay is an online marketplace for the sale of goods and services by a diverse community of individuals and businesses. People spend more time on eBay than any other online site, which means it is the most popular shopping destination on the internet (eBay, 2004). On any day there are more than 16 million items listed on eBay across 27 000 categories. In 2002 eBay members transacted $14.87 billion in annualized gross merchandise sales (Gross Merchandise Sales are the value of goods sold on eBay) (Ibid). eBay has local sites that serve seventeen countries apart from the United States, among them the United Kingdom, Canada, France, Australia, Germany and Taiwan. In

addition eBay has a presence in Latin America and China through its investments in MercadoLibre.com and EachNet respectively (Ibid).

As an e-commerce site eBay has been remarkably effective. *The Economist* calls it 'the most successful e-commerce venture by far' (Emmott, 2003). In Q4, 2003 net profits reached $103m, up 69% from the same quarter a year ago (Ibid). It has been called 'one of tech's only dependable growth plays' (Wolverton, 2003). eBay's annual sales have increased from $224.7m in 1999 to $1 214.1m in 2002. Net income increased from $10.8m to $249.9m in the same period (Hoovers Online, 2004).

Part of eBay's commercial success is its ability to shine as an information-selling site. What are the factors that make up this success? eBay offers at least forty different services and features that allow members to buy and sell on the site quickly and conveniently (eBay, 2004). Some of these features include:

- Paypal - an eBay company which enables any individual or business with an email address to securely and quickly send and receive payments online. It has become a global leader in online payment solutions and has 35 million account members worldwide (PayPal, 2004).

- Escrow Services - a site called escrow.com will protect your high-value transactions.

- Dispute resolution through SquareTrade.com - SquareTrade aims to help buyers identify trustworthy sellers as well as help good sellers show buyers that they can be trusted (SquareTrade, 2004). SquareTrade has two complementary services: the SquareTrade Seal - which is an easy way for buyers to recognise good sellers, and Dispute Resolution - which is an easy way for buyers and sellers to work out problems (Ibid).

- ID Verify - this program will verify your personal information in order to establish proof of identity and build trust.

- eBay Security Center - this allows users to access programs which facilitate safe trading.

- eBay Feedback Form - this allows you to check on your trading partner's reputation.

- Warranty program - which allows you to buy a warranty for your purchase

- Seller tools - tools like Turbo Lister and Selling Manager offer ways to manage bulk listings

- Options, Authentication and Grading - this allows users to get a professional opinion of an item's authenticity or condition

- Seller Central - which gives you the latest and most comprehensive information about selling on eBay

- Bidder Management - tools which manage who can bid on or buy your items

- Shipping Center - this provides shipping supplies and service

- Trading Assistants - find people who will sell your items for you. (eBay, 2004).

This plethora of services makes it easy for customers to use eBay and features like PayPal, SquareTrade and Escrow.com make trading through eBay secure.

What can be learnt from eBay?

Ebay seems to have thought of every possible way to encourage their customers to trade online. When browsing through eBay one notices how they ensure that people can order the mass of information about products in ways that suit them.

If one is searching for a Palm Pilot for example, one can see the items for sale closest to you, one can see the cheapest offers, or the ones which are about to be sold, or the ones that will be on auction for quite a while. These options assist customers to make decisions. They also allow them to feel in control. Quite apart from all the added features for information searching the site loads quickly and is easy to navigate. These are crucial factors in encouraging repeat visits from customers.

eBay seems to have avoided the tricky problems that many bricks and mortar companies face when moving online. They were always an online company so they did not have to worry about cannibalising their bricks and mortar channels, they do not need a large physical infrastructure because all they provide is a virtual marketplace and the customers themselves handle distribution issues. EBay has made a series of deals with or acquisitions of companies that provide complimentary service to theirs (Paypal for example), which ensured they could provide all the extra services their customers needed. In short eBay seems to be the ideal online business, free from many of the encumbrances many other e-commerce entities face.

Benchmarking the eBay site against the current and possible future business models

There is a great deal that can be learnt from studying eBay. The current business model is not nearly as sophisticated as that of eBay. A very useful feature that could be 'borrowed' in future is the way that eBay offers many different ways to access information - through special features like settlers grouped according the area in which they lived, or according to the time at which they arrived in Natal - this is like eBay's method of grouping items according to the highest or lowest price, the area in which the item is available and various other criteria. This feature would also work well for an advertising site or web portal because it would help to make the site user friendly and thereby encourage repeat visits.

Online Genealogy Market - Rootsweb

Apart from looking at an e-commerce site for benchmarking purposes a genealogy site should also be considered. The American site Rootsweb was chosen for this comparison because it is widely held to be a successful online genealogy site.

RootsWeb claims to be 'the oldest and largest free online community for genealogists' (RootsWeb, 2004). According to RootsWeb's information for advertisers the site contains interactive guides and research tools to help people trace their family histories. Its WorldConnect Project contains more than 209 million ancestor names and its Surname List contains more than one million surnames. RootsWeb also hosts around 22 000 mailing lists and 125 000 message boards and well-known genealogical sites like Cyndi's List, the USGenWeb Project, the National Genealogical Society, FreeBMD and Genealogy.com (Ibid).

RootsWeb's accolades include:

- In February 2000 Forbes.com designated RootsWeb as 'Best of the Best' (an elite list of the 33 best sites on the Internet). RootsWeb is still shown as a 'Forbes Favorite' on their 'Best of the Web' list for

- In February 2000 Rootsweb was named by Nielsen/NetRatings, an Internet Audience Measurement Service as one of the top ten 'stickiest' sites for Americans visiting the web from their workplaces during the previous month (Rootsweb, 2000). During January the site attracted 747 788 visitors who spent an average time of 61 minutes per visit (Ibid).

What Best Practices can be learnt from Rootsweb and Incorporated into current and future business models?

Some of the Rootsweb practices that are worthwhile emulating are:
Its marketing is carefully targeted - for example when users log on to the site they see adverts for diabetes research (as some medical conditions are hereditary people often

visit genealogy sites to trace their family history for medical reasons). This practice could be used in both the current and future models. eBay is good at stimulating curiosity in genealogy, they present angles like 'Read your Grandfather's Newspapers', 'Find an old boyfriend or girlfriend', 'Find a living person' and so forth. This strategy should also be explored in both current and future models. Rootsweb manages to unite a wide range of people by allowing genealogists to build and host their own web sites from Rootsweb - this helps to establish Rootsweb as a nucleus for American genealogists on the web. This strategy would be particularly well deployed in the web portal model.

Where does Rootsweb fail and how can this knowledge be applied to the current and proposed future business models?

Although Rootsweb has been very lucrative there are some areas in which it fails, for example, it has a great deal of screen popups and other forms of advertising. On one visit as many as five popups for the same product were displayed. This is overkill and can be very annoying for the surfer. The site uses many amateurish graphics which make it both untidy and slow - definitely a practice to avoid.

Conclusion

eBay and Rootsweb are both examples of best practice in e-commerce. eBay is both a successful e-commerce web site as well as a successful information-selling site. Rootsweb is one of the most successful genealogy web sites and close scrutiny of this site has provided useful information which can be applied to the BSN project. Both sites have many features that could be incorporated into the current and projected future business models for this project.

Conclusion

Martin Zollner, one of the authors quoted, remarked that in South African genealogy it was difficult to recover the costs of research from the client due to the amount of time necessary for research. This dissertation has revolved around that statement – how can one introduce an e-commerce business model to make a very small genealogy project profitable? Is this possible at all?

This dissertation has considered this question from many angles. The first chapter explained the background of the project and examined the state of South African genealogy in general as well as the market for this work, both in South Africa and abroad. The size, location, spending power and attitudes of the market were discussed, well as the sudden rise in the popularity of genealogy. American genealogy web sites have proved extremely popular and lucrative, but would the model employed by Rootsweb and other sites work with this project, which has a much smaller target market which is possibly less wealthy and less likely to be connected to the internet? The research questionnaire was discussed in some detail as it was a crucial tool to answer the questions above. Information about the market for the project was scarce and the web site's hit counter software and questionnaire was used to make the picture clearer.

The second chapter started by considering the projects unique selling proposition. After that Rayport and Jaworski's Market Opportunity Analysis was applied to the project, looking at factors like customers, resources and funding. A range of possible e-commerce business models were considered in detail, particularly that of selling records online and the advertising supported model.

As part of this dissertation a web site called 'British Settlers in Natal 1824-1857' (www.shelaghspencer.co.za) was created. This site is the current e-commerce business model for the project. In order to measure researcher attitudes to buying individual biographical records online a survey was placed on the site. This survey attempted to establish whom the online market for the project is, where it is located and what their

response to online selling of the biographical records would be. Another research tool that was employed was the hit counter on the web site home page. The visitor comments received on the site were also monitored. The research questionnaire established that although researchers were eager to exploit the convenience of the internet and download records online, they were unwilling to pay for the records – researchers were given the choice of paying either R30 or R10 per record and the overwhelming majority indicated they thought R10 was a reasonable price. The hit counter software showed that during the eight months the site has been operating the bulk of its hits come from South Africa, even though during the month the survey was running a good proportion of respondents indicated they were from the United Kingdom. It may be that once the records are online researchers will be prepared to pay a higher price for them, but to organise the site to sell records online will be expensive and time-consuming – not worth the risk if the market response seems lukewarm.

Hence the advertising related business models were turned to – this would involve generating income through the sale of adverts on the site. The first model was merely to advertise products, the second model, that of the web portal, involved setting up an online portal which would function as a hub for all activities revolving around a genealogy-related pastime.

The third chapter considers best practice in the creation of e-commerce web sites. It begins by defining benchmarking - the study of a competitor's product or business practices in order to improve the performance of one's own company. This is certainly useful as it is by no means clear how to make a profit from this project, so intelligence gleaned from successful companies could be put to good use. The chapter goes on to investigate general best practice in building a web site, looking at the fields of usability, search engine optimization and building an excellent search function. Best practice in the arena of e-commerce is then considered, with reference to fine-tuning a site to handle retail operations, competing in a global arena and building community on a web site (it has been shown that sites which encourage a community amongst their visitors do better than others). At the end of the chapter the existing BSN web site and the proposed future business models are benchmarked against these best

practices. It becomes clear that the existing site has a long way to go before it can boast many of the features considered best practice, especially as the site and the business model are still very small. However many of these practices would have to be adopted in the future if a serious attempt at becoming an e-commerce player was made. A number of the e-commerce best practices discussed referred to sites that competed globally, and since the BSN site has mainly a local audience it is questionable whether these practices need to be adopted (especially if it will be costly to do so).

The fourth chapter looks at two web sites, both very lucrative and highly popular, that are considered examples of best practice. The first, eBay represents best practice in the fields of both information selling (the BSN project is also an example of an information selling site) and e-commerce (eBay is considered one of the worlds most successful e-commerce sites). The second, Rootsweb, which is regarded by many commentators as one of the world's best genealogy web sites is an example of best practice in online genealogy.

Bay is slicker than Rootsweb in presentation and functionality. It makes trading online very easy, providing many different ways to view the products and providing a range of features to allay any qualms customers might have about security, delivery and the trustworthiness of their trading partners. Rootsweb is less sophisticated – it boasts heavy graphics and amateurish text, and too much advertising. In the author's opinion genealogists seek connection, hence are vulnerable and could resent feeling exploited online. For all those criticisms Rootsweb does many things right – it finds innovative ways to market the past – 'Read your grandfather's newspapers', 'Find old classmates' – and creates a huge hub of genealogy activity by allowing researchers to host their own web sites from it's portal.

What can be learnt from these sites? Find different ways to present the same information according to different readerships – 'settlers that arrived in the first ten years', 'settlers that lived in the Hammarsdale area', 'settlers that came from a particular region in Britain'. Breaking the information up gives researchers different ways to approach it.

The final recommendation below incorporates aspects of Rootsweb and eBay. It is held that an advertising or web portal model will be the best model to adopt. The web portal that sells advertising could perhaps be particularly effective. A web portal that contains many links to South African family history sites, as well as a service to help people organise family reunions is the final model settled upon. The portal would allow family members to host their own sub sites from it – this would increase traffic to the site and promote site stickiness, a valued quality amongst advertisers, the thinking being that the longer surfers stay on a particular site the more likely they are to consolidate all their online activities there.

The family reunion feature is one way to tie into the family history sites, while also bringing advertisers to the site. Zollner remarked on the rise of the family society in South Africa. This feature would allow related business to advertise to reunion organisers – businesses like caterers, decorators, conference venues, accommodation and transport providers might find this site useful. This borrows from the eBay example of avoiding online/offline integration problems by functioning solely as a means to unite buyer and seller, leaving logistics, returns etc, up to them. Changing the focus to family reunions is one way to open the site up from catering solely to mainly white English speaking KZN residents to any South African family that wants to get together – a much bigger market.

The British Settlers in Natal site would be part of this portal, along with other family and genealogy sites. One point that comes up frequently in this research is that family history researchers are seeking connection with others – a family reunion/family history site would cater to that need better than a site solely about family history. The site would also provide bulletin boards and chat software so that users could connect with one another (and stay online longer).

It is hoped that all these elements would combine to create that elusive entity - a lucrative South African genealogy e-commerce business model.

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Appendix A – Calculation of the Approximate Total of the Descendants of the Original Settlers

This is a rough calculation of the average minimum number of descendants alive today.

Number of years between 1857 and 2004 = 147
Minimum length of one human generation = 22 years (Minimum average age before reproduction)
147 divided by 22 = 6.68. Thus we could say that there have been six and a half generations of descendants since the first settlers arrived.

Total number of settlers = 2800
Average number of children per generation = 2

Number of settlers in 1857 - 2800

1879 - First Generation: 2800 x 2 = 5600

1901 - Second Generation: 5600 x 2 = 11 200

1923 - Third Generation: 11 200 x 2 = 22 400

1945 - Fourth Generation: 22 400 x 2 = 44 800

1967 - Fifth Generation: 44 800 x 2 = 89 600

1989 - Sixth Generation: 89 600 x 2 = 179 200

2011 - Seventh Generation: 179 200 x 2 = 358 400

However it is unlikely that any members of the first and second generations are still alive, so they must be excluded from our calculations.

5600 (First Generation) added to 11 200 (Second Generation) is equal to 16 800.

Hence the average number of descendants stands at the following numbers for the sixth and seventh generations:

Sixth Generation: 89 600 x 2 = 179 200 (- 16 800) = 162 400 in **1989**
Seventh Generation: 162 400 x 2 = 324 800 in **2011**

The average number of settlers alive in 2004 would be:

7th Generation: 324 800 - 6th Generation: 162 400 = 162 400

Number of years between 2011 and 1989 = 22

Average number of descendants born per year: 162 400 divided by 22 = 7381.81

Number of years from 1989 to 2004 = 15

Number of descendants born between 1989 and 2004: 7382 x 15 = 110 730

110 730 + Number of descendants in the 6th generation: 162 400 = 273 130

Minimum Average of Descendants Alive in 2004: 273 130

Appendix B: Online Questionnaire Used

Please take a few moments to complete this questionnaire. The aim of the questionnaire is to ascertain the best way to publish the results of Mrs Spencer's research. The results will be kept strictly confidential.

Region. In which region do you live?
[ ] KwaZulu-Natal
[ ] Rest of South Africa
[ ] Rest of Africa
[ ] Asia
[ ] Australia
[ ] Canada
[ ] Europe
[ ] Middle East
[ ] New Zealand
[ ] South America
[ ] United Kingdom
[ ] United States

PreferredFormat.
How would you like to acquire your records from 'British Settlers in Natal; 1824-1857'?
[ ] By buying a copy of the book online
[ ] By downloading an individual record from the internet (this record would only be for one settler and his or her descendants).
[ ] Both
[ ] Neither

Neither.
If you answered 'Neither' to the question above how do you prefer to source records? (Comment box included)

PurchaseOnline.
If you would prefer to buy records online what is an acceptable price for one electronic record (averaging half an A4 page in length).

(Please note - these conversions were performed on the 8th of September 2003 and the currency values may have changed since then. The conversions are intended as a guide only.)

[ ] R10 = £ 0.84, US$ 1.33, NZ$ 2.31, C$ 1.83, Aus$ 2.06, Euro 1.20
[ ] R30 = £ 2.51, US$ 3.99, NZ$ 6.94, C$ 5.48, Aus$ 6.18, Euro 3.60

Less. Less than R10 and this is why (comment box included)

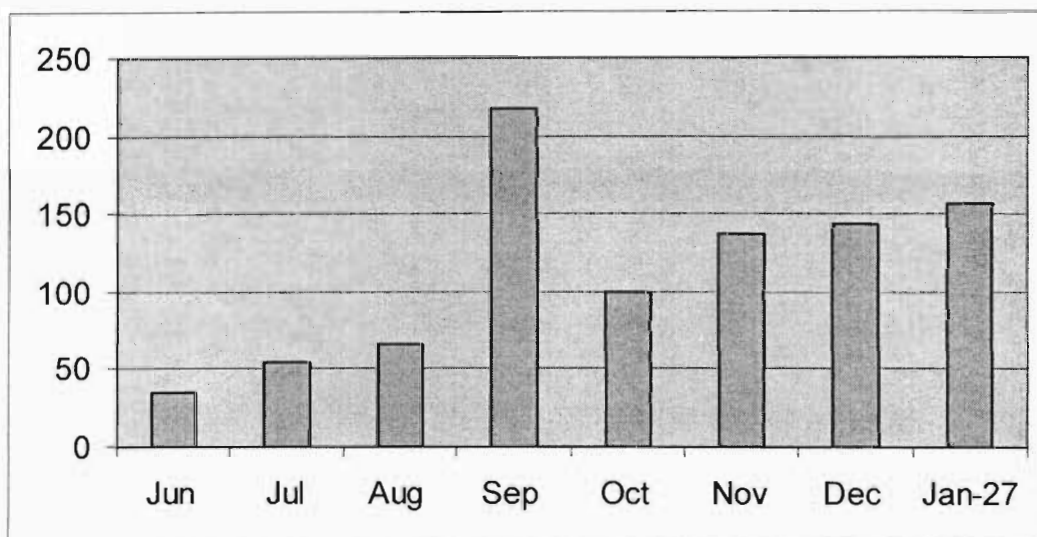More. More than R30 and this is why (comment box included)

Thank you for your time.

If you would not like to complete the survey click here to return to the home page.

Appendix C – Hit Counter Results for

www.shelaghspencer.co.za as of 8 Jan 2004

Graph A - Number of visitors by month

Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan-27
	35	55	66	218	100	137	144	157

Graph B - Referring Sites

Referrer	Visitors
A web site URL	16
http://www.genealogy.co.za/	14
http://www.google.com/search	6
http://www.aardvark.co.za/cgi-bin/cb/AfricaSearch.cgi	3
http://www.cyndislist.com/new0903.htm	3
http://www.ananzi.co.za/cgi-bin/ananzi/ananzi-apisearch.pl	3
http://search1.ananzi.co.za/cgi-bin/ananzi/ananzi-apisearch.pl	2
http://search.yahoo.com/search	2
http://search2.ananzi.co.za/cgi-bin/ananzi/ananzi-apisearch.pl	18
http://www.ananzi.co.za/catalog/HomeandHobbies/Hobbies/GenealogyandHeraldry/index.html	1
http://www.genealogy.co.za	1
http://www.ananzi.co.za/catalog/HomeandHobbies/Hobbies/GenealogyandHeraldry/	1
http://www.shelaghspencer.co.za/familiescovered/familieshm.htm	1
http://www.genealogy.co.za/index.htm	12
http://www.shelaghspencer.co.za/familiescovered/families.htm	10
http://www.google.ca/search	8
http://www.google.com.au/search	7
http://www.ananzi.com/cgi-bin/ananzi/ananzi-apisearch.pl	5
http://www.shelaghspencer.co.za/newsletter/newsletter.htm	5
http://search.ananzi.co.za/query.html	5
http://www.shelaghspencer.co.za/settlers/byrne_settlers.htm	4
http://www.google.fr/search	4
http://www.shelaghspencer.co.za/familiescovered/familieseg.htm	4
http://www.shelaghspencer.co.za/	4
http://www.shelaghspencer.co.za/other_sites.htm	4
http://www.shelaghspencer.co.za/familiescovered/familiesad.htm	4
http://www.google.co.uk/search	4
http://www.google.com.br/search	3
http://www.shelaghspencer.co.za/emigres/emigres.htm	3
http://www.shelaghspencer.co.za/settlers/settlers_intro.htm	3

Graph C – Visitors by Country

Country	Visitors
ZA South Africa	389
Unknown	190
COM US Commercial	139
AU Australia	9
CA Canada	8
UK United Kingdom	6
FR France	4
BR Brazil	3
NET Network	2
NL Netherlands	2
DE Germany	1
IT Italy	1
NO Norway	1
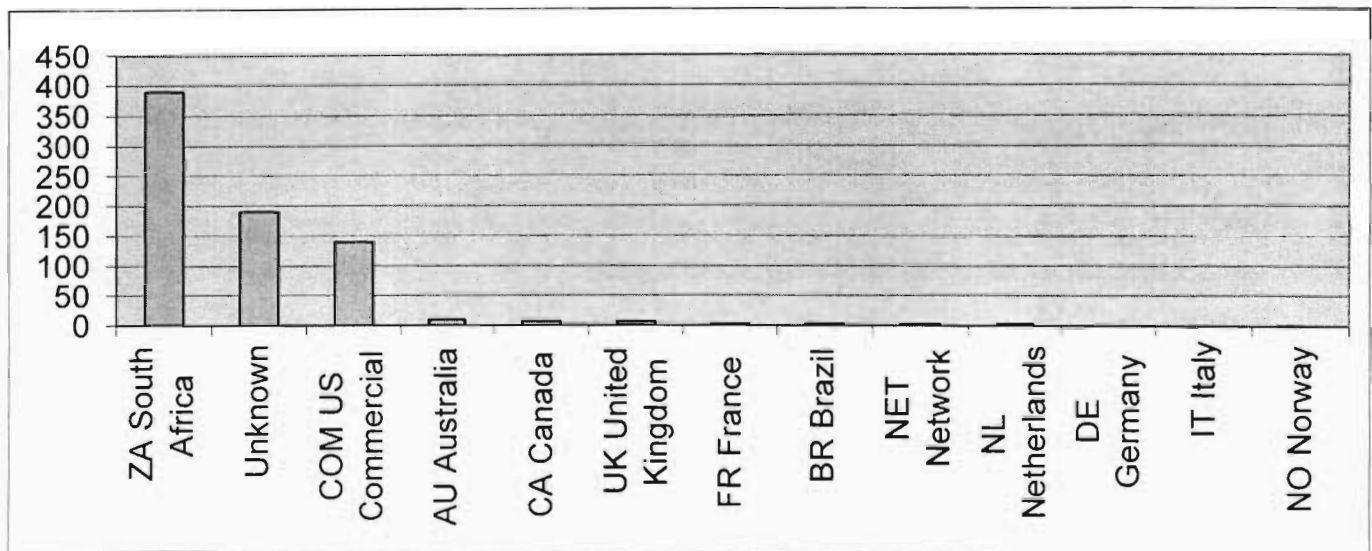
Appendix D. Survey Results from the British Settlers in Natal web site

- Analyzing 34 responses.

- Presentation generated on January 27, 2004.

In which region do you live?

Chart categories (x-axis): aZulu-Natal, Rest of South Africa, Rest of Africa, Asia, Australia, Canada, Europe, Middle East, New Zealand, South America, United Kingdom, United States

Chart y-axis: 0.00, 2.00, 4.00, 6.00, 8.00, 10.00, 12.00, 14.00, 16.00, 18.00, 20.00, 22.00, 24.00, 26.00, 28.00, 30.00

91
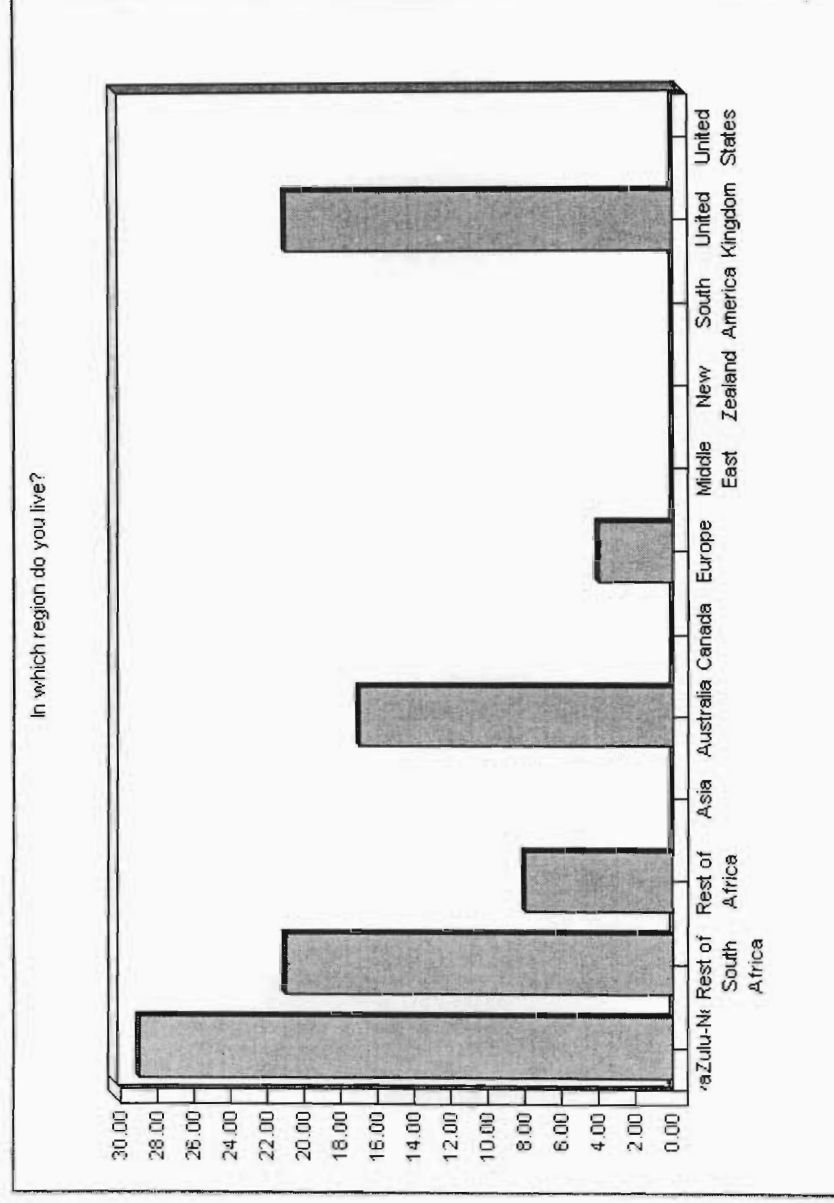
Q.Region In which region do you live?

Choice	Count	Percentage Answered
KwaZulu-Natal	7	29.2%
Rest of South Africa	5	20.8%
Rest of Africa	2	8.3%
Asia	0	0.0%
Australia	4	16.7%
Canada	0	0.0%
Europe	1	4.2%
Middle East	0	0.0%
New Zealand	0	0.0%
South America	0	0.0%
United Kingdom	5	20.8%
United States	0	0.0%

How would you like to acquire your records from 'British Settlers in Natal, 1824-1857'?

Bar chart showing responses. Y-axis (value) ranges from 0.00 to 45.00 in increments of 3.00. X-axis categories: By buying a copy of the book online; By downloading an individual record f...; Both; Neither.
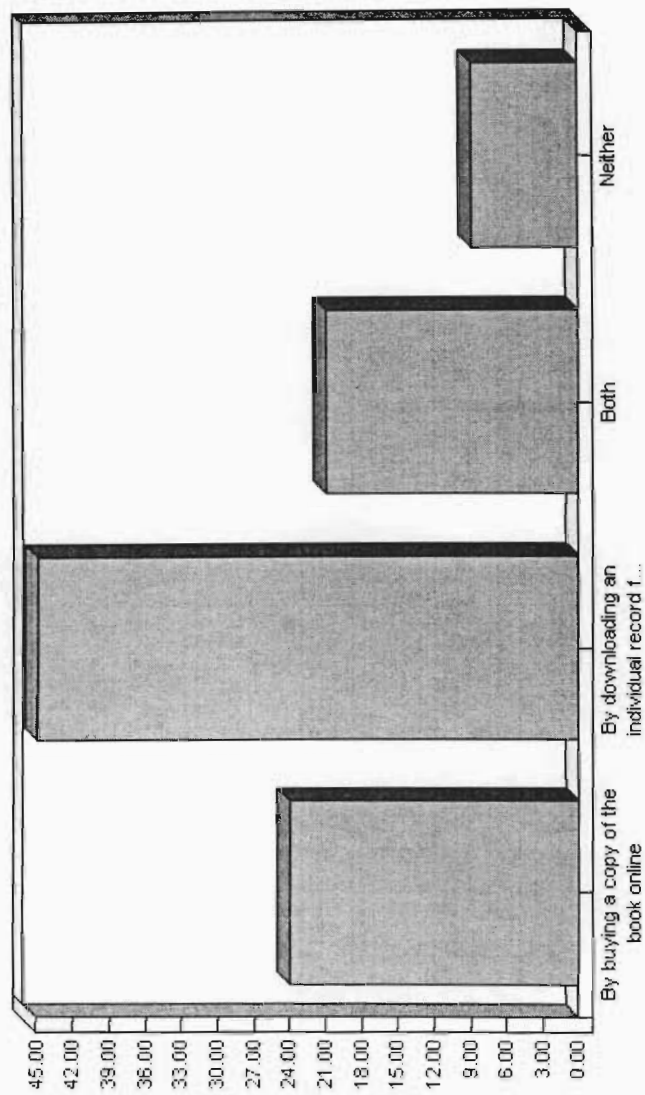
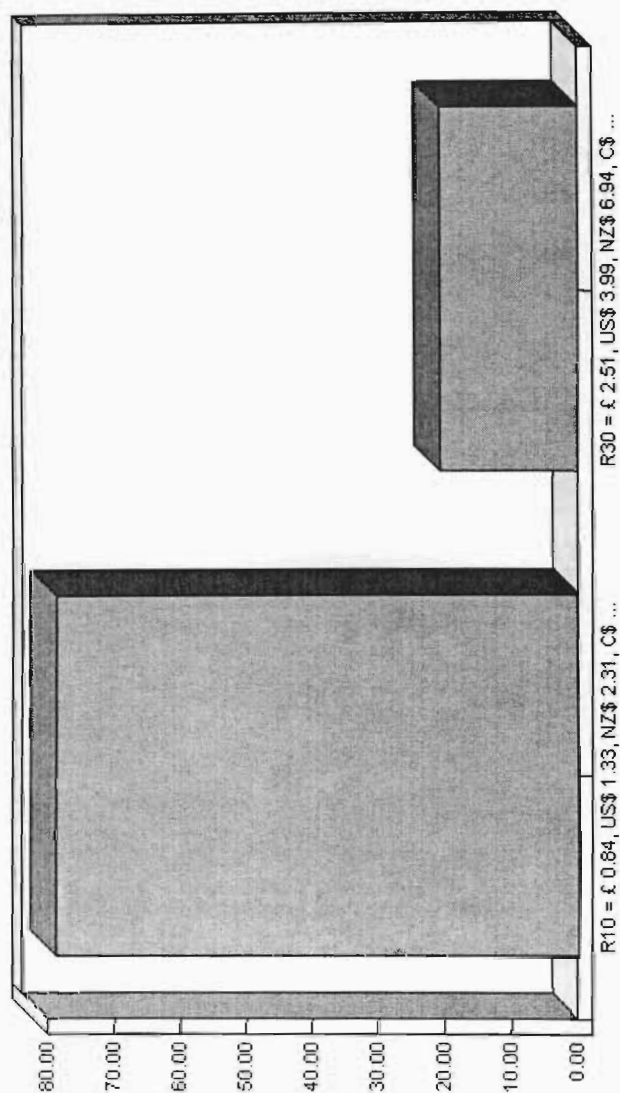**Q.PreferredFormat How would you like to acquire your records from 'British Settlers in Natal; 1824-1857'?**

Choice	Count	Percentage Answered
By buying a copy of the book online	8	24.2%
By downloading an individual record from the internet (this record would only be for one settler and his or her descendants).	15	45.5%
Both	7	21.2%
Neither	3	9.1%

Q.Neither If you answered 'Neither' to the question above how do you prefer to source records?

• on line

• As CDs, either by volume or by entire collection

• I have very little information to go on at present and until I have more precise details I would not be prepared to purchase on a whim. All I have is a surname of descendants that left UK in 1920 but I know there were relatives already in SA. All I have is "Aunt Tich" !!

Sample Answering: 3 responses

ord (averaging half an A4 page in length). (Please note - these conversions were performed on the 8th of September 2003 and the curr

80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00

R10 = £ 0.84, US$ 1.33, NZ$ 2.31, C$ ...

R30 = £ 2.51, US$ 3.99, NZ$ 6.94, C$ ...

Q. PurchaseOnline If you would prefer to buy records online what is an acceptable price for one electronic record (averaging half an A4 page in length). (Please note - these conversions were performed on the 8th of September 2003 and the currency values may have changed since then. The conversions are intended as a guide only.)

Choice	Count	Percentage Answered
R10 = £ 0.84, US$ 1.33, NZ$ 2.31, C$ 1.83, Aus$ 2.06, Euro 1.20	19	79.2%
R30 = £ 2.51, US$ 3.99, NZ$ 6.94, C$ 5.48, Aus$ 6.18, Euro 3.60	5	20.8%

Q. Less Less than R10 and this is why

• I am uncertain how much the patrons of the library would be prepared to pay or if indeed our system would allow this facility (submitted by the Principal Librarian of eThekwini Municipality's Don Africana Library).

• Because I am collecting the hardcopy version of the entire reference set but would like to keep open the possibility of acquiring updates

• Issue of price is related to accuracy or any online index, the more accurate the index, the more I am willing to pay as it will mean less 'hits' to get what I want.

• Only want brief detail of original Shuttleworth family member/s so that I can start genealogical work in the UK.

Sample Answering: 4 responses

Q.More More than R30 and this is why

• Most records one obtains from Australian sources cost about $23 each.

• Most of the information sourced within the UK costs around £5, for example copy birth certificates (£6.50), copy Wills (£3.00). Individual returns from the 1901 census cost £0.50 but can only be obtained by pre-purchasing a £5 voucher....

but if the cost of exchanging the £5 into Rand added a further 25%, the price begins to look expensive, especially if the enquiry is speculative and the information relates to an individual not falling into the research. This problem is even worse for US customers.

So, the secret would appear to lie in your ability to accept cheques in stirling or payment by credit/debit card, again preferably in stirling.

• It is worth it - R30 is not a lot of money

Sample Answering: 3 responses