

**Centre for International Research on
Communication and Information Technologies**

Policy Research Paper

No. 43

**The Story of Small Business
and Electronic Commerce**

by Supriya Singh and Claudia Slegers

ISBN 0 9577106 0 7

Production: Rachel Abrahams

© CIRCIT Ltd June 1998

CIRCIT at RMIT is an independent non-profit research centre located at RMIT University.

CIRCIT invites inquiries from organisations and individuals regarding the research program, publications, seminars, conferences, PhD research opportunities, international visitor and exchange programs and possibilities for local and international cooperative research.

The CIRCIT Research Program

The CIRCIT Research Program is structured around the following streams:

- 1. Uses of Information and Communication Services**
- 2. Policy and Regulatory Aspects of the Development of Information and Communication Services**
- 3. Communications Industry Development**
- 4. Emerging Issues**

The CIRCIT Research Program is currently funded by:

AsiaSpace, Australian Communications Authority (ACA), Australian Information Industries Association, Australian National Training Authority, Australian Telecommunications Users Group (ATUG), Department of Industry, Science and Tourism (DIST), Department of Communications and the Arts (DOCA), Ericsson Australia, Fujitsu, Melbourne IT, National Australia Bank, National Office for the Information Economy (NOIE), NCR Financial Services, Nortel Australia, Nortel US, NSW Government (Department of Public Works and Services), Office of Government Information Technology (OGIT), Optus Communications, Queensland Government (Department of Public Works and Housing), South Australian Government (Department of Industry and Trade), Tasmanian Government (Department of Premier and Cabinet), Telstra, Victorian Government (Multi-Media Victoria; Education), Vodafone, Western Australian Government (Department of Commerce and Trade).

Enquiries regarding details of the research agenda and sponsorship opportunities should be directed to:

Director, CIRCIT at RMIT, GPO Box 2476V Melbourne 3001, Australia Tel: +61-3 9925 2829; Fax: +61-3 9925 3122 Email: circuit@rmit.edu.au

This publication is copyright. Apart from any fair dealing for the purposes of research, study, criticism or review as permitted under the Copyright Act 1968, no part may be reproduced in any form, stored in a retrieval system or transmitted without prior written permission.

Table of Contents

Preface	1
Overview	3
Approach and Aims of the Study	3
Take- up of Electronic Commerce	3
Mixing and Matching the Use of Communication Services	4
Engendering Trust Online	4
Implications for Policy and Business Strategy	5
1. Introduction	7
1.1 The Report	8
1.2 The Key Questions	9
1.3 A Qualitative Study	9
1.4 Focusing on Use and Activity	10
1.5 Defining Electronic Commerce	11
1.5 How Much is Electronic Commerce Worth?	12
2. Small Businesses Connecting Online	15
2.1 Carol's Story – Managing without a PC	15
2.1.1 Selling is a personal experience	15
2.1.2 Introducing EFTPOS	16
2.1.3 Desire for online information may trigger PC purchase	17
2.2 The Power of Family Ties – Phil's Story	18
2.2.2 The Managing Director's son helped set up their Web page	18
2.2.3 Limited use of other online services	19
2.3 Brendan's Story - Traditionalist or Innovator?	20
2.3.1 The Traditionalist	20
2.3.2 The Innovator	21
2.4 Testing the Stories against the Data	23
2.4.1 The factors that do not influence take-up	23
2.4.2 Factors that influence take-up	24
3. Mixing and Matching Ways of Communicating	29
3.1 The story of Black's Consulting	29
3.1.1 The first customer contact is by telephone	30
3.1.2 Working with clients	30
3.1.3 The Internet is an important research tool	30
3.1.4 Faxing the newsletter	31
3.1.5 The invoice is mailed	31
3.1.6 Payments continue to be traditional	32
3.2 Matching Communication Channels, Activities and Meanings	32

3.3 Limits of Electronic Commerce	34
3.3.1 Limits to global commerce	34
3.3.2 Payments are the last to go online	34
4. Selling Boots Online – A Matter of Trust	37
4.1 Selling Boots on the Internet	37
4.2 Online Communication Must be More Explicit than Interpersonal Communication	38
4.3 Engendering Trust Online	40
4.4 The Customer Base is Recognised as the Main Asset	43
5. A User Focused Framework for Strategy and Policy	45
5.1 Main Findings of our Study	45
5.2 Connecting Partial Stories	45
Appendix 1	47
Appendix 2	51
Appendix 3	59
Appendix 4	63
About the Authors	65

List of Tables and Figures

Table 1:	Characteristics of Small Businesses	47
Table 2:	Social Characteristics of Proprietors of Small Business	48
Table 3:	Ownership of Information Equipment in Small Businesses	49
Table 4:	Use of Internet Communication in Small Businesses	49
Figure 1:	The Approach	11
Figure 2:	Defining Electronic Commerce	12
Figure 3:	Black's Consulting – A mix and match of communication services	29
Figure 4:	Characteristics of Communication Channels and Activities for Small Business	33
Figure 5:	Online Selling and Physical Selling: Retailing boots online	42
Figure A2.1:	Small Businesses' Communication Options	51
Figure A2.2:	Setting up a Home Page, Email, World Wide Web and/or Modem	53
Figure A2.3:	Factors Blocking the Take Up of Online services	57
Figure A3.1:	Use of Communication Channels across Groups	59
Figure A4.1:	Use of Communication Channels for Payments	63

Preface

CIRCIT's research program places a considerable emphasis on understanding the users' perspective on emerging information and communication services. This report of the qualitative study of the use of communications services by small business is the latest in a series which is gradually building greater understanding of this perspective.

Earlier work on residential consumers led to reports on *The Use of ICTs in the Home* (CIRCIT Policy Research Paper 40), *The Use of Electronic Money in the Home* (CIRCIT Policy Research Paper 41) and *Trust and Electronic Money* (CIRCIT Policy Research Paper 42). This work introduced frameworks for contrasting the users' and providers' perspectives, established an activities approach to considering usage, and elucidated the concept of "mix and match" of communications technologies to activities.

This study with small businesses consolidates these approaches. It extends the "mix and match" concept to begin an analysis of the ways in which the characteristics of communication channels are matched to the required characteristics of direct activities within a particular cultural and social context. It also identifies, significantly, the way in which activities change as they move online; in particular the greater information about process that accompanies them. In this sense, the move to online services parallels the systems analysis requirements associated with the shift of data processing from manual approaches to mainframe computers. It is not clear that this requirement for detailed process analysis is well understood by proponents of electronic commerce.

This report suggests that it will behove industry and policy makers to take a broad view of the integration of online services in business and other service activities. Obvious as it may seem that these services are but part of the practitioners' armory, a blinkered focus on the potential dominance of the "new technologies" can easily emerge.

The format of this report is innovative for CIRCIT research publications. A continual issue in developing and communicating our research program has been how to link the language of users, providers and policymakers; specifically examined in the report *Connecting Customers and Providers: A Focus on Electronic Money* (CIRCIT Research Report 16). The formal, academic style report does not work well for industry and policymakers, where the "story" of usage and its characteristics is best illustrated by recourse to particular examples. In recognition of this communication requirement, this report is structured around case studies, with the details of the underlying analysis referenced in footnotes and appendices. A more academic treatment of this study will be produced for journal publication.

This paper reports the results of the qualitative study based on open-ended interviews and three industry workshops. This qualitative analysis is rigorous. It discovers the questions and fashions the conceptual framework for the analysis of electronic commerce and small business. These understandings are being tested through a quantitative survey.

The support of Telstra, Nortel Australia, Ericsson Australia, National Australia Bank and the South Australian Government for this program of research is acknowledged with appreciation. We would also like to thank them for engaging in the research dialogue. We also acknowledge with great appreciation the reviews we have received from Professor Ron Johnston, Simpson Poon and Tony Trimarchi.

John Burke
Director

Overview

The main thesis of the study is that electronic commerce is not just a matter of doing business differently. It is a new way of business communication. The consideration of efficiency, competitiveness and globalisation need to be complemented by the issues of communication, meaning and culture.

Economics, technology and the characteristics of online goods and services are important parts of the story of small business and electronic commerce. However policy makers and industry strategists also need to focus on the way people are using the new technologies and services, and how business culture and social relations shape the use of these services. In order to avoid critical misjudgements, there is a need to bridge the perspectives of the providers and the users; to use the languages of economics and engineering together with the metaphors of sociology and communication.

Approach and Aims of the Study

The study is based on one to three hour open-ended interviews with 27 small businesses in Victoria and South Australia. The interviews were supplemented by three industry workshops with retail and wholesale trade; business and property services; and manufacturing. We are reporting on these two phases of the study. The understandings and frameworks reported in this paper will be further explored in a random representative survey of small businesses in Australia.

The focus of the study is on the small business and its activities, rather than technologies or the products and services being sold.

Our key questions are:

1. What factors influence the take-up of online communication services by small business?
2. How do people in small business mix online communication channels with traditional modes, such as face-to-face meetings, telephone, fax and mail, to communicate within their own firm, customers, service providers, other businesses and government, across a range of business activities?
3. Why do small businesses choose one communication channel over another for particular activities and audiences?
4. What is the distinctiveness of online communication?
5. What are the implications of our findings for the formulation of business strategy and government policy?

Take- up of Electronic Commerce

Electronic commerce is most often talked about in terms of rational cost benefit decisions. It is also described as a new way of doing business. Our data shows that neither of these factors were important enough to trigger a business to set up a Web page. Cost savings helped rationalise the decision for take-up, once the decision had been made.

The classification of people as innovators or non-adopters does not accurately reflect their use of new technologies. The rapid adoption of new technologies in one activity does not

guarantee an equally fast take-up in other activities. Our data shows there are five main groups of factors that encourage small business take-up of the Internet:

- The Internet is used to create the product or service, for example to do research or exchange documents or designs in collaborative work;
- The Internet is used to market to a present or potential international customer base;
- The customers, suppliers and/or service providers communicate online;
- Being on the Internet is seen as being part of the way things are done. It leads to unease with not having the expertise and a fear of falling behind the competition; and
- There is a sense of comfort with the technology because of the expertise of the key decision maker, colleagues, friends, family or trade associations. This sense of comfort also includes appropriate social and cultural meanings.

Mixing and Matching the Use of Communication Services

Small businesses use a mix of different communication channels across activities and groups. Face-to-face interaction, telephone and fax remain the most dominant parts of this mix for all the businesses studied. Access to online communication does not mean it will be the dominant communication channel. The only exceptions were online retail shop fronts, where email and the Web page were the primary means of communicating with customers.

The choice of communication channel depends on the fit between characteristics of communication channels, business activities and the social and cultural meanings of communication. For example, when record and surety that the information has been received are uppermost, such as with a contract, a letter is sent by mail or handed over personally or by courier. This is also one of the reasons why – despite rising costs - the cheque continues to be the dominant way people in small business pay for goods and services;

Face-to-face interaction is usually the preferred medium at the beginning of a project or when there are ambiguities to clear. Face-to-face interaction is also the medium of choice when there are sensitive or private matters to be discussed. This is because face-to-face interaction is interactive and personal. It also allows people to gauge the unspoken elements of communication.

The critical importance of face-to-face communication in business, together with knowledge of the culture and the customer limits the expansion of small business. across cultural and geographic distance.

Engendering Trust Online

When most communication is online, it needs to be more explicit than interpersonal communication in order to engender trust. When the shopping experience is translated online, at each point the merchant must knowingly give the information that would help the customer trust the online provider, even though the customer has not asked for that information. . This is because:

- Online communication lacks the implicit information communicated in face-to-face and telephone communication;
- Online communication lacks a sense of what is not being said;

- The information dimension of activities is enlarged;
- The explicitness of information helps redefine the nature of the activity. The attention shifts from payments to the management of money; from selling goods and services to giving information about goods and services in order to sell;
- The explicitness of online information on the Web, together with the use of email and the telephone to nurture a personal relationship offers the customer control and comfort with the transaction; and
- This comfort in turn translates to providers gaining a better knowledge of customers' needs, thus ensuring that it is the customer that is the main asset of the business.

Implications for Policy and Business Strategy

Focusing on the use of electronic commerce by small business will broaden policy and strategy by complementing the focus on business efficiency, competition and security with an emphasis on effective use, cultural meaning and trust.

This study suggests that policy makers and providers are more likely to increase online access and its effective use if:

- They promote electronic commerce as part of a mix of communication options;
- Electronic commerce is seen as one way to enhance business activities and communication;
- The Internet is seen as a new way of communicating meaning and engendering trust. It is this distinctiveness that has the potential of changing the way business is done and redefining business activities;
- The effectiveness of electronic commerce is linked to trust in online communication; and
- The effective use of electronic commerce is regularly monitored.

1. Introduction

Most successful online stores sell goods which are easily accessed online such as software, entertainment or publications. Alan¹ sells RM Williams footwear, moleskins, all-weather coats and belts from his Web site. He set up his online store three years ago and now has sales from it of about \$1500 a week. His main business, however, remains the physical boot store he set up in Melbourne in 1977.

Alan is also involved in the computer business. He used to be a salesman with IBM and at present also has a subsidiary software business. He says:

...Because of my involvement in the computer industry I have a few mentors that I talk to on a regular basis...In January 1995 I was having lunch with one of these people who said to me "Alan how much do you know about the Internet?" And I said "Well I read about it all the time and it sounds like a lot of hot air". And he said to me that he felt that it was a lot more than that and that his prediction was that any business that didn't have an Internet presence within three years would be out of business in five.

Now, that was probably an exaggeration but I listened to what he had to say and I thought, well, you know, I should do something about having an Internet presence...The way I looked at it is if we could attract people to the site then there was a chance we were going to make some sales and there wasn't a lot of money involved in setting it up.

Black's Consulting's core activity is advising businesses on information technology strategies. Their clients are predominantly from the public sector, including nearly all levels of government - local, State and Federal, and various government authorities. Black's set up a Web page at the end of 1996 because "everyone else was doing it." It was also a way of showing they were familiar with new technologies. Kate, their research officer says:

I think the logic behind it was that because we work so much in IT we want to be seen to be using that technology and understanding that technology and it's just another way of having your name out there...

Until April 1997, they had not received any customers as a direct result of the home page, however, they had received emails from people they knew who said they liked what they saw. Martin, the Managing Director of Black's says:

It's experimental for us, I think...My feeling is that the sort of stuff that probably ought to be on there is more likely to be perhaps descriptions about some of the interesting jobs that we might be doing or aspects of those jobs - things that will create interest. I think once we have that on it, then we'll get more of a response....

Well, obviously ... as in most small businesses...you've got to be pretty much focused on cost because you can't afford...costs blowing out. But I think in terms of our Internet page... we didn't do a hard cost benefit study. It was an issue that we felt was something that we should do and that in a sense it was

¹ The names of the business owners are pseudonyms to preserve confidentiality.

experimental. I don't think we really believed it was going to bring a flood of clients at the door...

Brendan, 68, is the owner of a farm machinery and supplies business in a regional town in Victoria. His father started the business in 1938 and Brendan's sons are now in business with him. Brendan moved fast on some of the new technologies. The store was computerised 13 years ago and now has a network of 12 PCs. He bought mobile phones for his sales force not long after they came out. He is waiting for the digital video disk to be marketed before he buys CD ROMs. Brendan thinks it will be very helpful for weed identification.

He has a modem for modem-to-modem communication with the Combined Rural Traders, his buying organisation, but he has yet to take up email or set up a home page. He says, "The Internet is the way of the future and I think you've got to get in and taste it to understand what it's going to be like." He is looking forward to retiring in six months and having the time to play with the Internet. One of his competitors has a Web page and Brendan thinks he will get one too, as long as the costs are not "exorbitant".

Alan's boots on line, Black's IT Consulting and Brendan's farm supplies are three faces of small business and electronic commerce in Australia.

1.1 The Report

In this report we tell the stories of 27 small businesses in Victoria and South Australia to understand the complexity of electronic commerce as a new way of doing business and communicating with customers, other businesses and government. We have chosen the story format for three reasons.

Firstly, the stories illustrate the main thesis of the study - that electronic commerce is not just a matter of doing business differently, but that it is a new way of business communication. The issues are not only those of efficiency, competitiveness and globalisation, but also those of communication, meaning and culture.

Secondly, the stories place the small business and its activities at the centre, rather than the technologies or products and services being sold. It is this user and activity-centred approach which distinguishes our study from most of the other studies of online services in business.

Thirdly, we believe that through the story we will best communicate with our audiences in government, industry, community and academia. We are taking our clue from the area of design where the story has proved useful as a way of talking to users and providers about issues that are complex, ambiguous and exploratory.² A more celebrated usage of the story to focus on the person and the transforming capacity of the brain rather than the disorder is seen in the work of the neurologist, Oliver Sacks³

The report can be read at three levels. The text tells the story. Through the footnotes we source our ideas and present the literature trail so that the study can be placed within the context of other relevant studies. The appendices detail and make transparent our analysis, and the way the stories fit into the detailed examination of the rest of the cases.

² Erickson, Thomas (1998). Design as Storytelling.
http://www.pliant.org/personal/Tom_Erickson/Storytelling.html on 23 February 1998.

³ Sacks, Oliver (1995). *An Anthropologist on Mars*. New York: Vintage Books.

1.2 The Key Questions

Through these stories, we draw out the issues relating to the following key questions:

1. What factors influence the take-up of online communication services by small business?
2. How do people in small business mix online communication channels with traditional modes, such as face-to-face meetings, telephone, fax and mail, to communicate within their own firm, with customers, service providers, other businesses and government across a range of business activities?
3. Why do small businesses choose one communication channel over another for particular activities and audiences?
4. What is the distinctiveness of online communication?
5. How do our findings connect with the formulation of business strategy and government policy?

1.3 A Qualitative Study

These stories are based on one to three hour open-ended interviews with 27 small businesses in Victoria and South Australia. The interviews were supplemented by three industry workshops with retail and wholesale trade; business and property services; and manufacturing. Participants in the workshops were drawn from State Government, small business, industry associations, and service and equipment providers. We are reporting on these two phases of the study. The understandings and frameworks reported in this paper will be further explored in a random representative survey of small businesses in Australia.

The 27 small businesses were from a snowball sample drawn from our personal, academic and organisational networks, the Victorian Government's small business data base and the E-merge list of small enterprises. The majority of the businesses in our sample have less than five employees, as these very small businesses comprise 85 percent of small businesses in Australia. Our sample is over-representative of small businesses which have PCs, modems, a home page and email. This was because we wanted to understand the use of online services. Our sample also includes two businesses which did not have PCs. Appendix 1 details the comparison of the qualitative sample with small businesses in Australia.

The data was analysed using NUD•IST (Non-Numerical Unstructured Data Indexing Searching and Theorizing) – a computer program for qualitative analysis.⁴

⁴ A detailed analysis of qualitative computing and the research process is in Singh, Supriya (1996). Money, marriage and the computer. *Marriage and Family Review*, 24(3/4): 369-398.

1.4 Focusing on Use and Activity

In this study we concentrate on the way people in small business use new information and communication technologies to communicate and do business with customers, other businesses and government. The focus is on the business and its activities rather than the technologies or the products and services being sold. This approach complements the more usual story of electronic commerce that is told in terms of small business' ownership of enabling equipment such as PCs and modems, together with the use of software.⁵

The emphasis on use and activity allows us to focus on the way people in business mix traditional and electronic ways of communicating within their particular social and cultural contexts. It extends the analysis found in the literature, which focuses exclusively on the actual or possible use of online services – particularly the Internet - by small business.⁶ The metaphors in our study are about use, meaning and communication, drawn from sociology and anthropology. Our emphasis on the social and cultural meanings of communication channels gives a complementary story to that told in studies of the factors that influence or prevent small businesses purchasing and using enabling equipment and software for online services.⁷

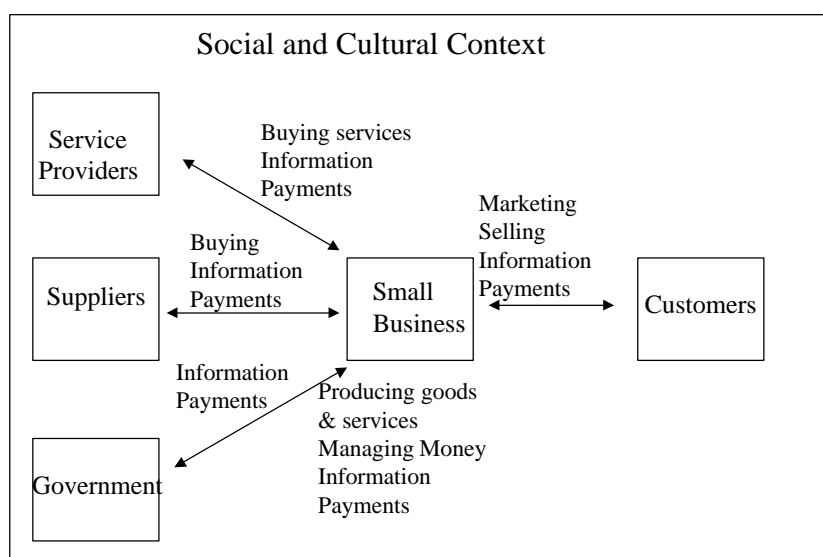
⁵ See Yellow Pages Australia. (August, 1997). *A special report on technology in the small business sector*. Small Business Index. Burwood, Vic.: Yellow Pages Australia; Yellow Pages Australia. (April, 1998). *Survey of e-commerce in Australian small and medium businesses*. Small Business Index. Melbourne: Telstra Corporation Limited; Spectrum Strategy Consultants (1997) *Moving into the Information Society – An International Benchmarking Study* At <http://www.isi.gov.uk/isi/mitis/>

⁶ See Beckley, R., M. Elliot, and Prickett, J. (1996 Jan/Feb) Closing the gap: information technology and the non-profit sector In *Non-profit World* Vol 14(1):36-42; Belcher, B.; Burgess, S.; Paull, S.; and Mohini, S. (forthcoming) *An Analysis of the usage of computer packages in Australian small businesses*. Melbourne: Department of Information Systems, Victoria University of Technology; Federal Bureau of Consumer Affairs. (1997). *Untangling the web: Electronic Commerce and the Consumer*. Canberra: Australian Government Publishing Service; Friedman, S. (1996, June 24) Technology gap spells doom for smaller agencies,. In *National Underwriter Property and Casualty/Risk and Benefit Management* 100(26):27; Greek, D. (1996, February 28) Do chips give you indigestion? In *Professional Engineering* Vol 9(4):30; Gunes, B. and Burgess, S. (1995) *The Strategic Use of Information Technology in Small Business: A Study of the Western Region of Melbourne*. Occasional Paper No. 10-1995 Department of Business Computing , Victoria University of Technology; Poon, S. and Swatman, P. *Emerging issues on small business use of the Internet: 23 Australian case studies*. Proceedings of the 5th European Conference on Information Systems, Vol.2, 882-895. Williams, K. (1995, September) Fast growing companies embrace new technologies In *Management Accounting* 77(3):32;

⁷ See Charles, Harris and Dye (1994) Small business attitudes towards computers. *Journal of End User Computing*. 6(1):16-25; Glynn, K. and Koenig, M. (1995) Small business and information technology. In *Annual Review of Information Science and Technology* edited by M. Williams New Jersey: Information Today, Inc (for the American Society for Information Science); Holzinger, A. and Hotch, R. (1993, August) Small-business computing: small firm's usage patterns. *Nation's Business*, 39-42; Julien, A. and Raymond, L. (1994, Summer) Factors of new technology adoption in the retail sector. In *Entrepreneurship: Theory and Practice* 18(4):79-90; Poon, S. and Swatman, P. *Emerging issues on small business use of the Internet: 23 Australian case studies*. Proceedings of the 5th European Conference on Information Systems, Vol.2, 882-895; Spectrum Strategy Consultants (1997) *Moving into the Information Society – An International Benchmarking Study* At <http://www.isi.gov.uk/isi/mitis/>; Thong, J. and Yap, C., (1995, August) CEO characteristics, organisational characteristics, and information technology adoption in small businesses In *Omega* 23(4):429-442; Yellow Pages Australia. (August, 1997). *A special report on technology in the small business sector*. Small Business Index. Burwood, Vic.: Yellow Pages Australia; Yellow Pages Australia. (April, 1998). *Survey of e-commerce in Australian small and medium businesses*. Small Business Index. Melbourne: Telstra Corporation Limited.

We graphically depict our approach in Figure 1.

Figure 1: The Approach



1.5 Defining Electronic Commerce

Electronic commerce is defined at three different levels. At the broadest level, electronic commerce is seen as *e-business*⁸ and is defined so as to encompass business activities and processes that use computer and telecommunications networks. At this level, electronic commerce encompasses all online business services and activities⁹.

The narrower definition of electronic commerce includes only Internet and EDI enabled commerce. This definition separates the use of the more recent business communication channels, like the Internet and EDI, from traditional electronic channels such as the telephone and fax which are now nearly universally used in businesses in the United States, Europe and Australia.

The third definition sees electronic commerce as Internet commerce. The different levels of the definition of electronic commerce are depicted in figure 2.

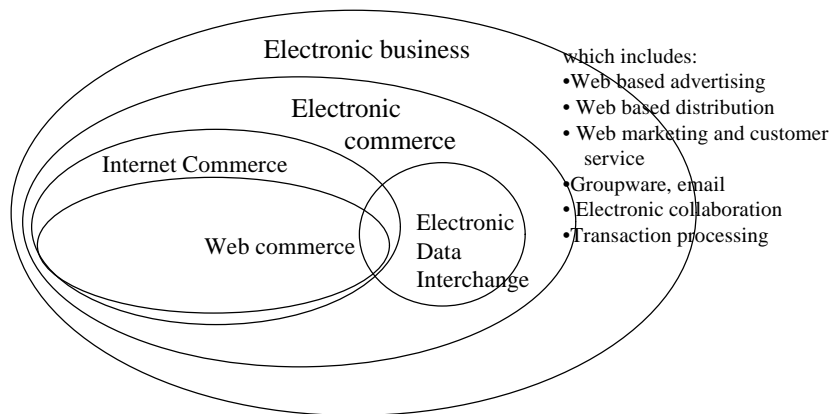
We studied electronic commerce at all three levels. The e-business level is the one most appropriate for discussing the way a business copes with new technologies. At the second level, for our businesses, modem-to-modem communication was relevant for discussing business-to-business relationships. Internet commerce was at the centre when the focus was on customers, for it is also

⁸ See Antonelli, Michael, 1998, *Wired Asia Pacific*, Presentation to the APEC-PECC seminar on electronic commerce, Bandar Seri Begawan, Brunei, March 10, 1998, Cowan, Keith, C. *Electronic Commerce: Why do we need to do anything?* Presentation to the APEC-PECC seminar on electronic commerce, Bandar Seri Begawan, Brunei, March 10, 1998

⁹ See Commonwealth of Australia, 1997. *Putting Australia on the new silk road: The role of trade policy in advancing electronic commerce*. Canberra: Department of Foreign Affairs and Trade, pp 45-46; Department of Industry, Science and Tourism (1998, May). *Getting Business Online*. Canberra: DIST, p. 8.

the only electronic channel that provides global access to customers on open networks, thus revolutionising the way businesses communicate with customers.

Figure 2: Defining Electronic Commerce



Source: Cowan, Keith, C. 1998. *Electronic Commerce: Why do we need to do anything?*
 Presentation to the APEC-PECC Seminar on Electronic Commerce, Bandar Seri Begawan, Brunei,
 10 March 1998 (Courtesy of Price Waterhouse).

1.5 How Much is Electronic Commerce Worth?

We do not know the value of electronic commerce. Many of its key qualities – convenience, variety and ease of access to information – are difficult to measure.¹⁰ A further difficulty is caused by definitions of electronic commerce varying widely between e-business, Internet and EDI, and Internet commerce.

A rough figure for business-to-business electronic commerce in Australia in 1997 is \$A25 billion (Personal communication, Peter Blanchard, Manager Marketing & External Relations, Tradegate ECA, 25 November 1997). This covers the value of orders and/or payments conducted online – that is, it includes the Internet, Electronic Data Interchange and interactive networks. Import/export clearances by Customs and electronic lodgements of tax are a major portion of this electronic commerce.

The Internet component remains very minor in Australia. Reliable figures are difficult to obtain.¹¹ One estimate is that in 1997, \$55 million was spent on online retail shopping.¹² In 2000, total

¹⁰ OECD Committee for Information, Computer and Communications Policy (1997) *Measuring Electronic Commerce*.

¹¹ Personal communication, David McGeachie, Australian Bureau of Statistics, 15 June 1998. The ABS in their February 1998 survey on *The Household Use of Information Technology* asked “Approximately how much have you paid for goods and services via the Internet in the last 12 months?” Of the 170,244 persons paying online via the Internet, 22.9% spent between \$nil and \$50; 27.9% spent between \$51 and \$100; 17.9% spent between \$101 and 250; 19.7% spent between \$251 and \$500; and 11.6% spent more than \$500. David McGeachie says, “It is important to note that the last 3 statistics above have a relative standard error of more than 25%. The other numbers are also relatively small although below 25%. Because of this

Internet commerce is projected to reach about \$4.6 billion and about \$500 million in sales.¹³ To place these figures in context, it must be noted that electronic commerce, interpreted as goods and services traded over the Internet, is forecast in the United States to grow from \$US8 billion in 1997 to \$US327 billion in 2002 in business-to-business trade alone. Although the growth is expected to be forty-fold within the next five years, this \$US327 billion will still only account for 2.3 percent of business-to-business revenue.¹⁴

Indications of the present and future extent of electronic commerce in Australia can be gleaned from the following statistics:

- In April 1998, 34 percent of small businesses were connected to the Internet. In August 1997, the figure was 23 percent;
- In April 1998, 12 percent of Australian small businesses had a Web page. In August 1997, the figure was 6 percent;¹⁵
- In the 12 months to February 1998, 207,000 people in Australia, 18 years and over, purchased or ordered goods over the Internet for their own personal use. 170,000 paid for these goods online.¹⁶

ABS is not publishing these numbers. While the numbers confirm that Internet purchasing by private individuals is quite small, I'm not sure that it would be prudent to draw other conclusions or attempt any further disaggregation."

¹² Department of Industry, Science and Tourism (1998, May). *Getting Business Online*. Canberra: DIST.

¹³ Australian Taxation Office. (1997, August). *Tax and the Internet*. Discussion report of the ATO Electronic Commerce Project, p. 20

¹⁴ Forrester Research (1997). *Sizing Intercompany Commerce*. Business Trade & Technology Strategies. Cambridge, Mass., Forrester Research Inc. , pp. 2, 6-7.

¹⁵ Yellow Pages Australia. (August, 1997). *A special report on technology in the small business sector*. Small Business Index. Burwood, Vic.: Yellow Pages Australia; Yellow Pages Australia. (April, 1998). *Survey of e-commerce in Australian small and medium businesses*. Small Business Index. Melbourne: Telstra Corporation Limited.

¹⁶ Australian Bureau of Statistics (1998). *Use of the Internet by Householders: Australia*. Catalogue No. 8147.0. Canberra: AGPS.

2. Small Businesses Connecting Online

Two thirds of small businesses in Australia are not connected to the Internet. In this respect, Carol, a small retailer of clothes and crafts, is more representative of small business in Australia than Alan, Martin of Black's or Brendan. She is unusual, however, in that unlike 74 percent of Australian small businesses, she does not have a PC. We found it instructive to delve into her story in detail to understand the factors that block and influence the take-up of online services. This is an important question for providers of online services and equipment, and for policy makers who are aiming to increase awareness and access to new information and communication technologies.

Carol does not see herself as a reluctant user of technologies. She introduced EFTPOS in her shop in 1996 and she is now looking at connecting to the Internet. Important factors propelling her towards connecting to the Internet are her social networks, her desire to gain more information on the goods she sells, and the possibility of connecting to like-minded retailers. It is the Internet that is now leading her to consider buying a PC and taking courses. Before she saw value in the Internet, she felt the PC would detract from her personal and intuitive approach to business. Now she thinks that when she gets a PC she may experiment with accounting software.

2.1 Carol's Story – Managing without a PC

Carol, in her 40s, is a retailer of clothes, craft and jewellery in an outer Melbourne suburb. Her shop smells faintly of incense, with coloured shawls and scarves draped on many surfaces. She has a secondary education and started the shop in the 1970s as a way of being self-employed and promoting handmade products from developing countries.

2.1.1 Selling is a personal experience

For Carol, face-to-face interaction remains central in her dealings with customers and suppliers. The majority of her customers are drawn to the shop because they have heard of it from friends and family, although she also advertises in the local newspaper. Most of her customers are women in their teens or twenties. Much of the charm in shopping at the store is the visual experience, and as Carol says, with her products you need to see and touch and "know what you are getting".

The personal face-to-face interaction is a critical part of the service that Carol offers. She says, "I'm constantly thinking about my interaction with the customers... My main emphasis is on natural interaction... spontaneous interaction."

Face-to-face interaction is also important for her relationship with suppliers. Carol visits her main two suppliers weekly. These are clothing warehouses in Melbourne. She visits another five suppliers approximately twice a month. Sometimes agents come to see her in the shop, but on her visits to suppliers, she views the clothes, competes with other retailers to buy clothes, and swaps industry information. These meetings are very social affairs involving a number of other retailers. She says:

It's a very sociable experience for me. I've been dealing with these people for twenty years...and we've almost grown up together in business...Usually there's tea and coffee and a lot of social interaction but our main occupation is getting down to business. There's always a very sort of energetic, volatile atmosphere as we all compete. Often I'm there mixing with other retailers who

might be competitors if they're reasonably close in area but I see them as colleagues and we're almost competing at the coal face for stock sometimes... We share friendly information as to what might be popular, some particular line I may not have noticed.

When she knows exactly what she wants, she at times uses the telephone, with the fax as a back-up. Mail is seldom used and her suppliers are not online.

Visits to her suppliers and observing her customers are important for judging the tastes of her customers and the stock that she needs to have in her shop. She says this judgment was easier when she was younger. However, now that she is in her forties, but her customers are much younger, she needs to observe more consciously. Carol explains:

I seem to be able to keep in reasonable touch with the market through the interaction I have with my suppliers who are in the city and in the flow of things. A lot of their customers are in Brunswick Street and I suppose by visiting Brunswick Street and Carlton and the city myself, I keep an eye on other retailers and on what's happening and by keeping in touch with world music and other cultural activities that relate to my interest in the business. But also I find having school children doing work experience is quite useful and I don't hesitate to get their advice and to sort of trade information with young people when I have opportunities.

She gets other information from travelling and reading magazines. One of her important avenues is communicating with Community Aid Abroad, for she considers it important to her business to be involved with the developing world.

2.1.2 Introducing EFTPOS

Carol's most recent take-up of an online service was in 1996 when she introduced EFTPOS (Electronic Funds Transfer at Point of Sale) in her shop. Carol saw the need to have EFTPOS when she noted that many customers liked to buy things at her shop spontaneously and did not necessarily have the cash with them. She says previously she lost some of these sales as only one of the two banks in her suburb had an ATM. She says:

I was constantly confronted by customers who wanted to buy something but had no ready cash and they would have to leave the shop and (try) to withdraw money if they had no other means of paying. Whereas with EFTPOS people are relieved to find that they have ready access to spending if they have that kind of card. Also for credit card sales it is rather more efficient and rather more reliable than the manual system that I had previously.

EFTPOS has already increased her sales noticeably. Although Carol's customers pay mainly by cash (70 %), she estimates that 20 percent of payments from customers are direct credit through EFTPOS with another 10 percent being credit card payments processed through EFTPOS. The introduction of EFTPOS has also meant she now goes to the bank once a week for the business instead of twice a week.

Implementing EFTPOS was trouble free for Carol. After a short wait, the bank implemented the system. She says the "few initial technical hitches were soon overcome with help from the help desk."

Although Carol has taken enthusiastically to EFTPOS, she does not pay for anything by direct debit. She pays her staff weekly by cash. She makes most of her business payments by cheque, and a few - such as payments to the incense dealer in New South Wales - by postal order. She uses cheques as they yield a good record through the cheque butts. She says:

It's mainly for my own convenience. I have good business records through my cheque butts of purchases. They're all in a readily findable place for taxation purposes and also for records. If there's any dispute with the supplier, I find it easier for my accounting to refer to cheque butts and to reconcile those against the invoices.

2.1.3 Desire for online information may trigger PC purchase

Unlike her decision to introduce EFTPOS, Carol feels that as yet she can manage without a PC. She says:

I manage very well without a computer and that's why I haven't implemented a computer yet....I feel the computer at this stage may not relieve my workload substantially... There are many aspects of paper work that still require manual handling...I do have quite a firm finger on the business and my bank balance is always a major indicator of how the goods are going.

Her reluctance to buy a PC is also based on her desire to hold on to her excitement in “the intuitive side of the business”. At the same time, she is worried about her lack of computer skills. She says:

At the moment I'm not computer literate and I regret that. My partner has a computer at home and so it is open to me to develop computer skills and use his computer. He encourages me to do that. So at this stage I'm looking at computer courses at local TAFEs and many different courses available. I'm just starting to make inquiries to do an introductory course.

Carol's inclination to investigate computer courses is also influenced by her women friends talking of the ways their teenage children access the Internet for information. She feels the “Internet would be very useful for me to follow up information.” She goes on to say:

I handle many different products and interesting things and I'm not immediately close to a library. I'm not a great reader so finding information on goods is something I have often neglected to do over the years...

For instance, I handle things to do with mythology and folk history and even to do with political issues dealing with South America, Central America. There are always interesting issues arising from things that I sell. Customers are curious about the history of a particular product. It might be a piece of jewellery from the Amazon region...

Once she has a PC, she thinks she may use it for book keeping. Her brother-in-law who is in small business has long been recommending accounting programs to her. Carol is sceptical about the PC reducing her workload. She wonders whether the PC would help her with the inventory control, but would appreciate it greatly if it did. However, beyond its mere functionality, she says she “would benefit from the skills and the confidence that it would bring to be computer literate in this age.”

As a first step she has filled out the forms for a listing on the Internet through the Age Search. She says:

I laugh at myself to think that such a small business as mine would have any relevance on an international scale but...possibly for my own satisfaction I could communicate with the little shop in Munich or somewhere that might have similar interests and there are many shops around the world like this one that would have people who have similar interests. I occasionally go to Bali and I meet people there who would have a similar business to me and perhaps we might want to communicate.

2.2 The Power of Family Ties – Phil’s Story

Carol’s story shows how her friends and their children helped gave her an idea of how she could use the Internet. That led her to consider buying a PC and perhaps use it for book keeping – something she had earlier resisted, when it was put to her as an efficiency tool. In Phil’s manufacturing business, the most recent use of new technologies is setting up their Web page in the first quarter of 1997. They had been looking at setting it up because it would mean cheaper and more extensive marketing, but the trigger was the Managing Director’s son who was studying computer science. He helped change the mind set of the Managing Director.

The Web page has not meant a change in the way they use their email or do their banking. The company remains without personal email and continues to bank at the branch.

2.2.2 The Managing Director’s son helped set up their Web page

Phil, 38, is a cost accountant with a company that manufactures heat combustion equipment in Melbourne. The company was established 20 years ago. It has about 60 employees and an annual turnover of \$25 million.

Early in 1996, the company had people coming in and talking to them about the advantages of having a home page. Phil says:

At that stage we sort of looked at that and said yes it’s a new and exciting medium, very good for advertising.... Particularly for the dollars it costs. Having an ad in the Yellow Pages or something like that which is just fixed and never changes, and you have to have one in every state. Here you just have a web site, bang, full colour.. I mean like our Yellow Pages cost us something like \$12,000 a year....

The cost savings alone did not get them the Web page. It came about because the Managing Director’s son was studying computer science. He designed the page so it was not expensive for the company. Most importantly, the Managing Director became supportive. Previously, Phil says, the attitude of the Managing Director was that yes, “computers are necessary but don’t bother me with them. And all of a sudden he’s seen what these things can do for him.” The Managing Director now sees the potential marketing impact of the Web page in the Asia Pacific.

Phil’s greatest enthusiasm for the Web page is spurred by its cost savings and the ease with which information can be presented and updated. He says they are able to give “tons more information” than with the Yellow Pages. The Web page has nearly wholly replaced

brochures. They can also show that their manufactures extend beyond heat combustion equipment. Phil says:

People tend to associate our name with whatever they dealt with last time. We're a multi-faceted company. We can be involved in almost anything in the heat processing business. ...So we put our home page up which says these are all the industries that we're involved in. And once you go into those industries, it says these are all the sorts of things that we've done in those industries.

At present, their Web page carries pictures of some of their designs. They have to be careful not to give too much detail for they do not want to infringe on any sensitivities. Phil says:

Generally, by the time the plant's installed it's in somebody else's premises. So you have to be a little bit careful about that. And equally we have to be a little bit careful about what we're showing people, because otherwise people can see our designs...and they could go off and build it almost from the photo...We're currently looking at getting a CD, with a lot of photos in it, which we're not prepared to put onto a home page.

Moreover, it helps to have a home page if the company is promoting itself as “being at the leading-edge of technology” The web address is on their business cards. Phil says, however, “That isn't particularly an aspect that drove this project. I mean it's probably a consideration in there somewhere.”

Phil remains enthusiastic about the Web although there have been no specific orders that can be directly traced to their Web page. He also says the Internet has not been “terribly useful” for information about their industry. They continue to rely on face-to-face interaction, engineering journals, trade magazines, conferences and vendors.

2.2.3 Limited use of other online services

The company's experience with the Web has not changed their email culture. They continue to have an organisational email address, with no personal email addresses. Phil says email is used primarily by their engineers and salespeople stationed in the Asia-Pacific. Email is also used for speedily transmitting large design files interstate or overseas.

Email is not used to a great extent for communication with their customers. Phil recollects only one order being received by email and that was from Brazil. Face-to-face interaction remains central for getting new customers, finding out what they would like, and quoting a price. The telephone, fax and mail come into play when working out the particularities of the agreement. The resulting documents are either faxed or mailed, roughly in equal proportion.

In their communication with their suppliers, the fax is central. Virtually all their orders are faxed.

Within the company, most of the top level managers do not have PCs on their desks. Engineers have PCs but these are used for design purposes, not for word processing. The belief in the firm is that engineers are paid to do engineering work, not to figure out word processing programs.

Phil says:

Engineers tend to have computers, but they have them for the use of engineering type programs, to help them do some of their calculations that they need to do. They're not expected to be using them, writing memos around. That's what the secretaries are for.

On the payments side, the manufacturing business has been processing its payroll electronically since 1995, and the employees get paid by direct debit. But they pay their suppliers by cheque. Phil says:

The difficulty you have to some extent with that is ... when you're paying a creditor, they need to know what the payment's for and that can be a whole series of invoices.

They are also equipped for online banking, but find no need for it. Every day, from their local branch, they pick up their daily bank statement, which sometimes lists more than a page of transactions a day. The bank informs them when sums are deposited into their accounts, as the sums are usually large. Every morning, to be doubly sure that they are within their limits, they telephone the bank for their bank balance. They have an account manager at the bank who is conversant with their business. The decision not to do their banking online is a result of the lack of need, and the possibility that the new services will come with a fee. At present, says Phil, the information "doesn't cost us anything".

2.3 Brendan's Story - Traditionalist or Innovator?

The story of Phil's manufacturing business shows that setting up one new online service like the Web page does not necessarily lead to using email as a personal connecting medium within the company or for communication with customers and suppliers. Brendan's story shows that the take-up of new technologies is very complex and is not a matter of classifying people as adopters or non-adopters of new technologies. Brendan sees himself as an innovator but this does not translate into him taking up every new technology directed at his business. When he trusts the technology and it does not entail unnecessary risk, the efficiency of the service for his business is the main factor driving take-up.

2.3.1 The Traditionalist

Brendan, 68, sits in his glassed office, in a store reeking of pesticides, and talks about his business. He sells farm machinery and supplies, goods as varied as nuts, bolts, dog food, oil for the tractor and the tractor itself.

Brendan's business is based on personal interaction. He prefers talking to his customers face-to-face in the shop or on their farms if possible. "I like to meet a person eye-to-eye," he says. He also finds face-to-face interaction most useful for gaining information. He tells how a customer came into the store asking for a pesticide he had read of on the Internet. Brendan was able to produce the pesticide, because he had been briefed by the Combined Rural Trader notices and a salesperson who had come around some time before.

Brendan portrays himself as a traditionalist in some things, and an innovator in others. His most conservative decisions have been reserved for his basic telephone system. He purchased an outdated Commander system at a discounted price, as it has all the functionality he needs. He says:

I thought to myself, my Dad had never ever bought a new car when it first came out. He always waited until it was run out and then you go and buy a new car. His argument was all the bugs are worn out of it and I should get a good car now. I suppose that still sticks in my mind...

The fact that Telecom (Telstra) is the provider is a matter of comfort for Brendan for he likes dealing with an Australian company. He also banks with the Commonwealth Bank, where he has all his business and personal accounts. This has been the company's first and only bank ever since his father's partner chose it because he was friends with the Manager.

Though Brendan's business is the only one among the 27 businesses we interviewed that used online banking, the branch remains a primary access point to his bank. He pays his suppliers wholly by cheque. "It's safe as a legal document, isn't it?" he asks. Brendan, as yet, has little trust in the security of direct transfer and EDI. The few direct credit payments he has received for tractors from finance companies have not shored up his confidence. He tells about one of his customers who paid him twice. Brendan says:

Being a \$50,000 account, we don't wait to send out a monthly account for that amount of money. As soon as the client has accepted delivery of it we send out an account. Well we sent it out... and Mrs Jo Blo got the account and said "Oh we got the machine two or three days ago, I'll pay for it." And in the meantime someone at the finance company paid us. And then the [finance company] manager rang up the client and said, "Hey what are you doing here?" That's the way we found out. So we just wrote out our cheque and he gave us his account number and I went down to the National Bank and paid it in.

2.3.2 The Innovator

Brendan bought a fax nearly as soon as it was available. He didn't wait for the bugs to be ironed out. He computerised his business 13 years ago because he could see it would increase business efficiency mainly by computerising the accounting system. He bought mobile telephones for his sales force not long after they came out. He was an instant convert as the very first use of the mobile telephone secured the sale of a \$40,000 tractor. He has also installed EFTPOS.

He is waiting for the digital video disk to be marketed before he buys CD ROMs. Brendan thinks it will be very helpful for weed identification. He is considering desktop publishing for his regular information updates to his customers. He also has a modem connection to the Combined Rural Traders, the buying organisation for small wholesalers in agricultural products, and in the next six months, is hoping to have a Web page for his business, if only to give information about the products and services they offer.

Brendan says business is going to change radically with the Internet.

He says:

I don't know how far down the track that will be, but you know there's going to be a revolution in sales...I think the electronic transfer of information is going to be the big part of it. I was at a lecture the other day where a chap talked about people buying tractors.... (A group) might want five tractors, so what they do is they put the five tractors up for quotes, you know, and one fellow said there is one company in Queensland, either a cotton or cane growing company, put them up.... (They got) quotes from Africa and all sorts of places... on the Internet...

These people will ... sell you the tractor and you've got to go and get the service... The warranty would still be carried by the supplier of the tractor, the company that built the tractor, yes. But there is a big change coming.

He is not only planning for a time when communication by email and the Web page will be more frequent between him and his customers, but he is also informed about the latest satellite technology and how it can be used to increase crop yields. He says the big change that is going to occur is its effect on the competitiveness of growing a crop.

Using a crop of wheat as an example, he explains:

The way you make a profit in growing a crop of wheat really is to get so many more tonnes per hectare ...The way that they're doing that overseas is that they're analysing the yield of the paddock that the crop grows in, where that corner of the paddock might yield two tonne to the hectare and this yields four tonne to the hectare. So when you come to re-cultivate that crop again, the satellite up there transmits a signal down to the sowing machine and says next year when you do that corner over there you put fifty percent more fertiliser on that part than you do on this part, and then you increase the yield and then you even the yield out.

And also there's the fact that in America they're having monitors in the paddock, spikes in the ground which tell, say a company like our company here, that Mr. Smith's paddock out there - you bring it up on a radio link with direction finders - and you say "Oh look the moisture content in that field is ready to be sown". So you ring up Mr Smith and tell him, "Sir, we've just determined that the premium time for you to sow your crop is right now". And either he will hire you to go out and sow it or he will sow it himself and then the satellite will tell him the mixture that he sows. This is the way it's going.

As Brendan's business is going to be supplying Mr Smith the seed and the fertiliser, he says:

We've got to be interconnected with his brains, but that's not here yet. Only in a couple of isolated places is it being trialed here but I think in America... for planting some, perhaps wheat... they're certainly using the method of varying the super phosphate and the grain. You know you've got rich ground in this corner and poor ground in this corner so the machine varies the rate of application... and it's all done with communication but that's communication with a satellite, with a geo-stationary satellite sitting up out there.

2.4 Testing the Stories against the Data

Carol's, Phil's and Brendan's stories reveal the complexity behind decisions to take-up new information and communication services. We place their stories amongst the experiences of the remaining 24 businesses to identify factors that trigger or contribute to the take-up. In Appendix 2, Figure A2.1, we give a case-by-case summary of small businesses in our sample, grouping them in six major groups according to the take up of the latest service – a home page; email; the World Wide Web; modem; PC and fax. The factors that influence or block take-up are tested against each case to see whether the explanation fits the data. These are displayed in Figures A2.2 and A2.3.

2.4.1 The factors that do not influence take-up

Electronic commerce is most often talked about in terms of rational cost benefit decisions. It is also talked of as a new way of doing business. Our data shows that neither of these factors were important enough to trigger a business to set up a Web page. It is also not possible, as Brendan's story shows, to usefully classify people as innovators or non-adopters. The rapid adoption of technology in one activity does not guarantee an equally fast take-up in other activities.

No cost-benefit analysis

The experience of Black's Consulting was repeated throughout our businesses in that there was no cost-benefit analysis before initially setting up a Web page. The aim is to keep initial costs low, generally by using available expertise in the business or through friends and family. For most of the businesses, setting up a Web page was a leap of faith, with a hope that the benefits would follow.

Even where a cost-benefit analysis was carried out, as with Phil's manufacturing business, that analysis in itself did not lead to the setting up of the Web page. It became, however, an important rationalising factor once the chief executive had a measure of comfort with the decision because of his son's expertise.

Perceived cost savings arises as a more important point when people are talking of the benefits they get from email, although the case of Naomi, a food wholesaler, demonstrates the subsidiary status of cost as a trigger. She uses the telephone first, for it is a more culturally appropriate medium for her Taiwanese customers. The lower cost email substitutes only for the second phone call. The reason she is enthusiastic about email, however, is that Naomi and her husband use email constantly to keep in touch with their families overseas.

It is instructive that none of the five businesses that were not on the Internet cited cost as a major barrier. The factors blocking take up were a lack of comfort with the technology, that the service did not fit their business needs, and that their customers and suppliers did not want to communicate with them online.

Not part of a wider business strategy

The small businesses did not set up a home page as part of an integrated marketing and communication strategy. That kind of strategic thinking most often comes after they have gained a sense of the distinctiveness of the medium. The exceptions were the two web designers in our sample, although Web pages were their business.

Their experience with clients confirms our conclusions. Rick, a web designer, says in the beginning it is the technical people in the business who come to him, for the business sees the Internet as a technical issue. However, Rick sees his first task as getting to talk to people in the marketing department or the managing director. When he asks them, "Why are you doing this? Why do you need an Internet presence? ... usually they don't know." He says:

... really they didn't even know if they wanted email or if they wanted to develop a presence or how to approach it, or how much it cost. They had never seen the Internet before and most of them had never used a computer.... the Internet is very scary to a lot of them and it's really hard to get a handle on it....

The only other person in our sample who saw the Web page as part of her business strategy was Naomi. She still has not set up her Web page, but the thinking she is doing for the Web page is part of her rethinking of her business - whether she will continue as a facilitator between Australian manufacturers and retailers in Taiwan and China or whether she will set herself up as a manufacturer producing goods that are customised for her retailers.

Adoption differs according to activity

Brendan's case of being an innovator in the area of fax, PCs, mobile phones and online banking but a traditionalist in the areas of telecommunications and payments is repeated throughout the other businesses. Even some of the businesses that had online shop fronts paid their staff with cash or cheques.

Steve, an accountant, was one of the first to use the PC for book keeping in 1977. In 1989 he participated in the Australian Taxation Office's pilot trial of electronic lodgement. Both of these increased the efficiency of his business. However, Steve has only implemented email only for his business as it has been pushed on him by banks and insurance companies. Steve does not use email, but rather prefers to spend his time meeting clients face-to-face or talking to them on the telephone. He is not comfortable with using the mouse and Windows and does not have a Web page. He has never used ATM or EFTPOS and pays his suppliers by cheque, although if the ATO were to introduce electronic payments, he says he would consider it if they gave a receipt that was acceptable in court as evidence.

2.4.2 Factors that influence take-up

Our data shows there are five main groups of factors that influence the take-up of the Internet by small businesses:

- The Internet is used to create the product or service, for example to do research or exchange documents or designs in collaborative work;
- The Internet is used to market to a present or potential international customer base;
- The customers, suppliers and/or service providers communicate online;
- Being on the Internet is seen as being part of the way things are done. It leads to unease with not having the expertise and a fear of falling behind the competition; and
- There is a sense of comfort with the technology because of the expertise of the key decision maker, colleagues, friends, family or trade associations. This sense of comfort also includes appropriate social and cultural meanings.

Creating or selling a product/service

The trigger factor for establishing a home page was most often that it helped in the selling of the service or product. Giving information about a business' goods and services was an important part of the marketing exercise. It was particularly important when the business already has, or is seeking overseas customers. This was true of all the businesses with a home page, except for Alan who sold boots online. He says he got on the Net because he feared he would not have a business in five years time otherwise.¹⁷ It was after he put himself on the Net that the selling began.

Email played a more important role in creating the product or service. It was used in this way by 12 of the 18 businesses with email. This includes sourcing information, and working with others on the same document or project. There were only two exceptions – Steve an accountant and Naomi a wholesaler – who took up email for different reasons. For Steve, it was a matter of the banks and insurance companies telling him they would communicate with him only on email. For Naomi and her husband, email was the way they communicated with friends and family overseas; email was migrating from the personal sphere to business. For others, such as Hamish and Frank, the World Wide Web was the first and most important service - Hamish's law firm needed it to quickly access the latest government legislation for their trust cases, while Frank needed to access research on sound engineering (his service), which is not readily available elsewhere.

Communicating with customers and suppliers

Large suppliers, service providers and customers are often in a position to dictate to small businesses their preference to use one communication medium over another. In this sense, small businesses are takers rather than initiators of online communication. The importance of these communication networks is seen particularly in small businesses where the Internet is not critical to the creation or selling of their products, as with in our sample accountants, farm supplies wholesalers, retailers, people in the building trades, and grocers.

The farm supplies wholesalers in our sample had modem-to-modem communication because that is the way their major suppliers gave them the most up to date pricing and stock information. They also have modem-to-modem communication because their buyers' organisation, the Combined Rural Traders, advocates that their members have modems, in order that they can supply price and product information via this channel, as well as by fax. None of these wholesalers have email as their customers prefer to deal with them face-to-face.

The importance of customers online as a driver for small businesses connecting to the Internet is best demonstrated by the businesses that do not have email. They do not need it to create their product or service, and they believe their customers prefer the face-to-face transaction. However, Brett, an accountant in an inner suburban accountancy practice, expects that soon many of his customers will want to communicate with him online, so he is experimenting now with email at home.

¹⁷ Susan Polk, Mira Networking, Melbourne says that her experience with demystifying the Internet for businesses is showing that "Far fewer are falling for the "I've been told I have to go online because my business will fail otherwise" myth, at least in my experience (8 hours a day on the phone for the last 13 months). Interestingly, this was the case 12 months ago...many small businesses who chose to be early adopters due to the Panic Factor.. were burned severely by spending a fortune on Web sites that were little more than online brochures." Personal communication, 8 May 1998.

*The way things are done*¹⁸

Though the majority of people and small businesses do not use the Internet, it is fast becoming an idiom of the way things are done today and will be done in the future. This is the background to much of the desire to be on the Net. This is what makes Carol uneasy about not having computer expertise, Brendan wanting to catch up with the wholesale trader down the road who is on the Internet, and Alan fearing he may not have a business in five years time if he is not on the Internet.

Those who are already connected are confident that they are a part of the way things will be done in the future. In a sense, being connected is the objective, for it allows the business to feel it has a toehold into the future. The urgency is not so great for businesses whose customers and competitors are not on the Net.

Fear of being left behind is an important factor in exploring the possibility of being on the Net. Rick, a web designer, says:

...the reason most people want to be on the Internet is driven purely by fear... They find out that their biggest competitor is on the Net and all of a sudden we get this phone call, you know, saying "We've got to get on the Internet and we need it now. Our competitor is on the Internet and I think everybody else is getting on there."

A sense of comfort

A sense of comfort with the online service is a necessary condition for take-up. This was true for all the businesses that had a Web page, email and/or modem-to-modem communication. This comfort came from their own expertise, that of family and friends, or expertise promoted by trade associations. With this comfort came the feeling that the pace, costs and framework of innovation could be controlled by the small business. In Phil's case it was this sense of comfort that proved to be the trigger for embracing new technologies.

The businesses that did not have the awareness and expertise did not take up the Internet. The lack of expertise effectively blocks the take up of online communication services. Ian, a tractor wholesaler in a regional South Australian town, sees himself as an innovator. He has a PC with a modem, but says:

I've never gone that next step because I probably find my biggest problem is that I'm not educated enough. I'd need to go back to school to deal with a computer in that sort of light.

Having expertise is not a sufficient condition for take-up. There has to be the perceived business need and communication networks. Ellen, who runs a farm machinery store in a regional Victorian town with her husband, is a case in point. Much of their business is equipment repairs and farmers trading in old equipment to buy new items. Her husband used to run the computer operations of a manufacturer before both of them started their own business. However, they do not have email as most of the farmers around do not have email.

Carol's story has illustrated the importance of ensuring that the technologies convey appropriate cultural and social meanings. As long as she saw the PC as taking away from the

¹⁸ We are grateful to Susan Polk for her comments.

personal and intuitive aspects of the business that she valued, she argued that a PC would not necessarily help. However, when the message began coming to her from her social network of women with teenage children, and she saw how she could use the Internet to gain more information about a cause she held dear – encouraging the products of developed countries – she became enthusiastic enough to consider buying a PC.

The social and cultural context of use is central to the take up of new technologies. The industry workshops and our interviews showed the crucial role played by industry associations in the wholesale agricultural trade sector in persuading their members to consider new technologies such as modem-to-modem communication, EFTPOS and EDI.

3. Mixing and Matching Ways of Communicating

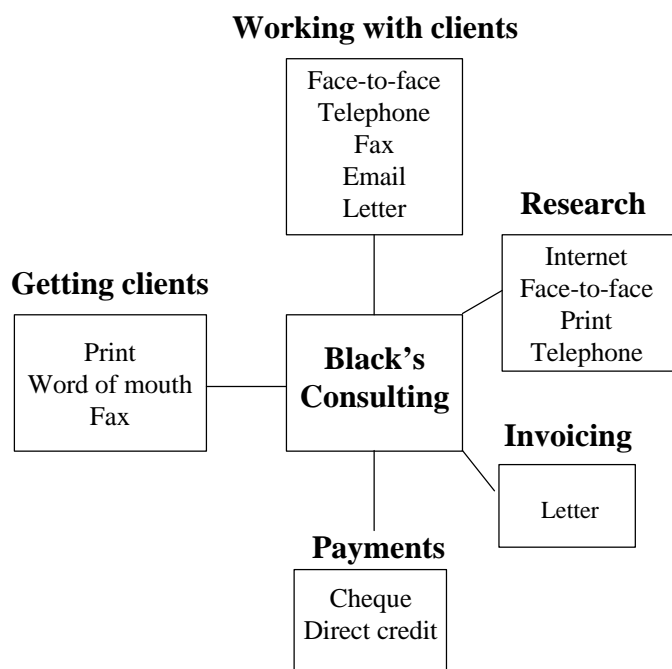
Having the option to use online communication does not translate to using online services for every business activity and group. Businesses use a mix of communication channels across groups and activities in diverse ways. The full range of this variation across the 27 businesses examined is displayed in Appendix 3 in Figure A3.1. It shows how a business may use email and modem-to-modem communication to communicate with suppliers, but meet face-to-face and talk on the telephone with customers. A business may have a Web page for marketing and selling its goods; it may even receive payments by credit card over the Internet, but still might pay its own staff by cash and its suppliers by cheque. Another business may use online communication services very expertly but still have an outdated business telecommunications system.

We tell the story of Black's Consulting to show the variety of ways in which people communicate differently across activities and groups. We also use this case study to ask how the choice of communication channels is influenced by the fit between the characteristics of communication channels, the nature of the activities and the social and cultural context of communication.

3.1 The Story of Black's Consulting

Black's Consulting uses the full range of available communications options, from face-to-face interaction to the Internet. Printed tenders and word of mouth references are important for getting clients, while face-to-face communication and the telephone remain critical in working with clients, the Internet and face-to-face communication for research, and the mail for invoicing. The mix across activities and groups is depicted in Figure 3.

Figure 3: Black's Consulting – A mix and match of communication services



3.1.1 The first customer contact is by telephone

As with all the businesses interviewed, other than businesses dealing with software or online shopfronts, Black's get 80-90 percent of their customers via traditional means - tendering, personal contact and word of mouth. Martin, Black's Chief Executive, says:

... someone knows that we've done certain work or whatever and they contact us and that contact would almost invariably be a telephone call in the first instance... I think a letter would be too formal. I think people don't write letters so much these days, not on a first contact. They would ring up and say, you know, Fred Smith told me about the work you did at such and such.... Maybe it gives them a way of just getting a sense of the people and the organisation at the other end.

3.1.2 Working with clients

Black's work with their clients in a mixture of ways. Martin says:

Telephone obviously. Fax, email to a lesser degree, mail for certain things, for formal things. You see... you may be dealing with different parts of the client organisation. So let's say there's a contract for the job. You may be dealing with the purchasing section of the organisation who deal with all the contracts and so at certain points you would exchange documents and that would be done probably by mail or by courier

It depends on who we're dealing with, which means we select. Sometimes, with some clients there are things that we produce and we could easily save a lot of time and effort and money to the organisation if we gave it to a courier and got them sent or put it in a bag and just posted it to them. But we'll often go up personally and deliver it and have that constant personal contact....

3.1.3 The Internet is an important research tool

Kate, who is both the administrator and researcher, says the WWW is an important research tool for gathering information. She says:

People seem more likely to supply you with information if you approach them electronically, I don't know why that is, but from my experience of researching it seems to be the case.

With the telephone, you need to firstly get the right person at the right time. Kate says:

You can spend an hour getting one document in total, throughout the day, you know, ringing someone and them ringing you back and then you explaining to them and saying "I'm not working for a competitor"... You have to emphasise this point. If you go via email....you've got a direct line to that person and then you can write a letter and send it to them and usually you get an immediate response.

For Kate, the Internet has emerged as the most powerful communication tool. She says:

I've found that I get email contacts from certain Web pages and then I end up in contact with a researcher in the United States who's done all this research and I'll say "Well can you help me out? Where should I look? ..."

3.1.4 Faxing the newsletter

Against this picture of obvious online expertise and use, Black's Consulting faxes a one to two page newsletter three or four times a year. They write about the work they have been doing, highlighting particular projects or individuals. They fax it, for as Martin says:

In our judgement fax tends to penetrate into the organisation better than a physical document. I guess our feeling was that ...(mail) will wind up in a heap of letters all delivered at the same time on a secretary's desk, who will open it and probably chuck it out if it's just a general sort of marketing thing. A fax is more likely to get through that process because it won't come in with the rest of the mail probably. And it seems people tend to treat faxes as being somewhat more urgent. So it's more likely to get to the individual that it's targeted to.

The faxed newsletter is cheaper than a mailed newsletter, particularly when taking into account the cost of time. Black's use a database and Flexifax software, which sends out a group fax, making only one call and therefore avoiding line hold ups. Martin says:

In the newsletter... we focused a lot more on the cost benefits and how we should approach it and those sorts of issues. We focused a lot more on it than the Web page....I would tend to suspect that our experience is probably reasonably typical of service providing companies

Kate believes the other advantage is that people are used to faxes. She says:

I think with marketing you have to approach people in a way that they're comfortable...You can push the limits a little bit, but I think email would be pushing the limits too far. And there's also the problem with getting email addresses from people.

3.1.5 The invoice is mailed

Though they communicate with clients by email, Black's has not considered sending documents such as invoices by email. Kate says:

When you consider options like that, you really need to think about the person who's receiving it - whether they use that technology a lot, whether they would think that that is an important way, an urgent way of receiving something.

The immediacy of an email could indicate that Black's require urgent payment. However, Kate believes if that was the message they were trying to get across, it would be more effective to send the invoice by mail, because "Most people are still used to the traditional ways of getting an invoice that says "Overdue" and a little man standing there with his hands in the air."

Martin says an important reason for not using email for invoicing is that often there needs to be a sense of distance between payment issues and the consultant-client relationship. He says:

We often divorce the payment, the chasing up of the payment from the relationship with ...the purchaser in the client organisation. So if there's a delay in payment, it may not be the person who's been doing the interfacing on the project. It may be someone else who rings them up and basically acts as a person in the accounts payable department saying we haven't received our cheque for our invoice number whatever, rather than the person who has done the job.

The distancing of the client relationship from the payment issues is compared with the doctor-patient relationship. Martin asks:

What would the patient think of the doctor if the doctor was ringing her up and saying 'Look, I noticed you haven't paid for that examination I gave you two months ago'.

3.1.6 Payments continue to be traditional

For Black's Consulting, payments continue to be traditional, with cheques remaining the dominant way of paying and being paid. They now receive a few of their payments by direct credit, as some local governments have started paying by directly crediting their account.

Black's Consulting does not bank online, and nor do they pay for anything on the Internet. Martin says, "There'd be no way I'd use the Internet for any cash, I'm still suspicious of that, of actually using, having any money transfers on the Internet because I don't think it's secure enough." When they downloaded software from the Internet, they sent a cheque in payment. Their use of the latest in online services for research and communication with clients and other consultants does not automatically translate into their use of electronic money.

3.2 Matching Communication Channels, Activities and Meanings

Black's Consulting shows the importance of having a fit between the characteristics of communication channels, business activities and the social and cultural meanings of communication.¹⁹ Emailing an invoice for Black's was inappropriate for it would have given the wrong meaning. Rather, mailing the invoice is believed to be the appropriate action. Similarly the cheque remains important as a means of monitoring cash flow and providing a record of payments made.

Examining face-to-face interaction, telephone calls, fax, email, the Web page and the letter, we can place the different communications channels and business activities along the dimensions charted in Figure 4.

¹⁹ See Markus, M. Lynne. (1994). Electronic mail as the medium of managerial choice. *Organization Science*, 5(4), 502-527 for an analysis of how the effectiveness of email within organisations has more to do with the way email is socially constructed than the inherent characteristics of email as a communication channel. This is different from the argument that it is the inherent "richness" or lack of richness of communication channels that influences use. The closer communication is to face-to-face communication, the richer the medium.

Figure 4: Characteristics of Communication Channels and Activities for Small Business

Characteristics of Communication channel and activity	Most appropriate -----Least appropriate						
	Record	Letter	Fax	Email	Face-to-face	Telephone	Web page
Establishing relationship	Face-to-face	Telephone	Email	Fax	Letter	Web page	
Reducing ambiguity	Face-to-face	Telephone	Email	Letter	Fax	Web page	
Personal communication	Face-to-face	Telephone	Email	Fax	Letter	Web page	
Speed (Written communication)	Email/fax/ Web page	Letter					
Cost (Overseas communication)	Web page	Email	Fax	Letter	Telephone	Face-to-face	
Accessibility – one to many (Over time and distance)	Web page	Email	Fax	Phone	Face-to-face	Letter	
Manipulability (Data)	Email	Web page	Computer diskette by mail				
Hypertext	Web page						

Going back to the case study of Black’s Consulting, we see that in an activity such as invoicing, where the record is the most significant characteristic, the letter is the most important way of communication.

At the beginning of a relationship, when a person needs to be sure that understandings have been reached and a measure of comfort has been achieved, face-to-face interaction is the chosen medium. The lack of a record also makes this the medium of choice when there are sensitive or private matters to be discussed.

Face-to-face communication allows for immediate interaction. It is personal communication with the ability to gauge the non-verbal elements of communication. One of its most important advantages is that communication is placed in a personal, cultural and situational context. Within this context, it becomes easier to assess the importance of what is said and what is not said. Communication by silence is done most effectively face to face. These non-verbal, unspoken elements of communication cannot be replicated with email communication. Once the relationship has been established then email is effective in maintaining it.

Email, however, can seldom be matched when there is a need to work together on the same digital data. Email is unobtrusive, appears transient because it can so easily be changed, yet like a letter or a fax, it also persists as archived text.²⁰

These characteristics of communication channels contribute in different ways to engendering trust by giving the user control, comfort and a feeling of being cared for and attended to in an interaction. Communicating by email is cheaper than by telephone and the Web page is cheaper than individual transmission of information. However, it is the fit between the social and cultural meanings of the communication channels and the characteristics of these channels and business activities which contribute in different ways to engendering trust.

Naomi, a wholesale trader dealing in food and manufactured goods, visits Taiwan regularly to promote her wholesale trade. These personal visits remain essential because in Taiwan, that is the way business is done. The face-to-face interaction is crucial to establish trust. Once a relationship is established she makes 20 to 30 minute telephone calls to discuss the business in hand. Though an email would be cheaper, the first telephone call is essential. It is only the second telephone call that can be substituted by email, if the desired meanings are to be communicated.

3.3 Limits of Electronic Commerce

Small businesses reach the limits of electronic commerce when faced with business across geographical and cultural boundaries. Their experience also shows that payments are the last activity to go online within the business.

3.3.1 Limits to global commerce

The critical importance of face-to-face communication in business limits the global expansion of small businesses in areas where doing business is wholly dependent on customer relationships. In the industry workshops, when a consulting business was given the opportunity to expand to South East Asia, there was a visible drawing back. The success of the business depended on an intimate knowledge of local needs and continuing face-to-face communication. If the business did not have the needed cultural and social knowledge, it would be difficult to satisfy customers.

3.3.2 Payments are the last to go online

Small businesses in our sample accept payments in a wide variety of ways, including cheques, cash, credit cards, debit cards, EFTPOS, direct credits and payment by credit card over the Internet as demonstrated in Appendix 4. They continue however to pay mainly by cheque. The comfort with the cheque is that it generates a paper record in the cheque butt, which is central to the way small businesses account and prove expenditure.

In all but two of the businesses, the cheque remains the dominant way small businesses in the sample pay for goods and services. The first exception was Dino, a grocer, who buys groceries with cash. The second was Leon who uses his personal credit card to pay for business expenses, so as to accrue FlyBuys points. He then reimburses himself with a cheque drawn on the business account.

²⁰ Kling, Rob (1996) Social relationships in electronic forums: Hangouts, salons, workplaces and communities. <http://www.december.com/cmc/mag/1996/jul/kling.html> as on 3 September 1997.

Small businesses do not pay online in any significant way. This is true even for Alan who receives payments by credit card over the Net. He pays for almost all goods and services by cheque and cash.

Direct debit is used by three businesses. Phil's and Ian's businesses pay staff by direct debit. Leon is the only one who uses direct debit to pay for routine business expenditure such as the mortgage, utility payments and periodic advertising expenditure. Three businesses (Frank, Keith and Alan) have paid for some business goods and services with a credit card over the Internet. For Keith, it was a one-off small payment for goods he could only buy on the Net. Frank pays by encrypted credit card for some goods and services. None of the small businesses in the sample have used digicash or e-cash.

The main reason for the reluctance of small business to pay online is the lack of trust in online payments.²¹ Paying online also changes the nature of the activity, in that the focus moves from payment to the management of money. In the next section we see how one business has used the distinctiveness of online communication to engender trust.

²¹ For a more detailed consideration of issues of trust, see Singh, S. and Slegers, C. (1997). *Trust and Electronic Money*. Policy Research Paper No. 42, Melbourne: Centre for International Research on Communication and Information Technologies.

4. Selling Boots Online – A Matter of Trust

The Internet enables information to be speedily and cheaply transmitted from one-to-one, one-to-many and from any-to-any. When this information via the Internet supplements information from other traditional channels, then it is the speed, cost, accessibility and replicability of the transmission that is distinctive. The nature of online communication changes, however, when online communication is the only or the dominant channel of communication. How, then, does the nature of Internet communication change and how can trust be engendered online?

Alan's online boot store provided us with a ready-made comparative situation for he has a physical and an online boot store. Customers for Alan's physical boots store are mostly local Melbourne people, however customers for the online element are mainly North Americans (70%), with some from Europe and Asia.

4.1 Selling Boots on the Internet

The site is rich in information about the products, the provider and the store's history. One page features a history of RM Williams products and the store, detailing the uniquely Australian flavour of the products: ("moleskin pants...densely woven cotton that not even a snake can bite through"). His Website relates the story of the founder of RM Williams:

It takes an individual with great character to create a legend. RM Williams is the remarkable man behind the legendary boot and clothing collection...Born in 1908 and raised on a farm in the mid north of South Australia, he left home at an early age. With a natural resourcefulness, he learnt basic bush survival skills while working in the remote areas of the outback as a lime burner, gold digger and camel boy for the missionary, William Wade. He explored much of central Australia including the Gibson Desert and the Mulgrave...Life is as tough as it gets in this arid wilderness, so in order to survive the harsh conditions he learnt bush-lore from the aborigines and stock handling and horse skills from the bushmen on the isolated cattle stations north of the Nullarbor...

The home page displays a colour portrait photograph of Alan. Each product has its own page featuring characteristics and a colour photograph of the product, and pull down menus for customers to order, stipulating colour, size (in a choice of European, American or Australian sizing systems), and quantity.

Once the customer has chosen the features they want from the pull down menus they can then choose whether to proceed with the order. This takes them to a page detailing the total number and type of products in their 'shopping cart'. They are then taken to a page where they provide their name, postal address and credit card number. Prices are quoted in Australian dollars with an approximation in US dollars. Customers are encouraged to email about anything they want to clarify.

The site also directs customers to a page which features comments from previous customers:

...whenever somebody buys off us they generally send me back an email thanking me and I put those straight up onto the Internet...When you see that there's forty or fifty people delighted with what they get and saying that they're

a perfect fit and they're never worn anything as comfortable you start to get the confidence. And I also put those previous customers' email addresses up so that anybody who really wants to query it can email them and ask them. And they really do that.

Upon receipt of the order, Alan telephones the customer to authenticate his or her identity. This reassures him that the credit card owner does in fact live at the address provided. It also adds a personal touch appreciated particularly by his American customers, reassuring them that the merchant is genuine and caring. Alan says:

I just got an order this morning and I'll probably ring them up and thank them for the order and say that I'm just calling really to check that you placed the order, and it will be a thirty second phone call. But they're always delighted to hear from another country.

Asked about the difficulties with footwear sizing, Alan said he has had remarkably little negative feedback. As a precaution he sends boots which are slightly bigger than the original estimation with a pair of thick socks just in case they are slightly too big. When the orders are received from the web, he cuts and pastes them into his *Info Select* software (information management package). The order is then printed out and given to the employee downstairs who packs the boots to be sent off. The customer information on the order is also used to keep a record of each customer (eg. where he or she lives, what was ordered).

Alan's online store gives customers three options to pay: unencrypted credit card number, emailed, faxed or telephoned. Alan estimates that 95 percent of customers email their credit card number, with a small percentage faxing their credit card number.

Currently we don't have a secure server which I would like to have and which will be coming soon... but my own feeling is that one has more chance of [fraud] when you hand a card to someone in a restaurant if there's a dishonest employee in that restaurant who wants to take note of my credit card number I think there's more chance of that happening than someone plucking it out of cyberspace but each person to their own fears.

Alan has paid for software, books and CDs with an unencrypted credit card on the Internet and displays little mistrust in such electronic payments. Despite this, he pays his suppliers and wholesalers with cheques because they prefer this. He prefers to use a credit card where possible for things such as with utility payments, but pays his five staff in cash.

Goods are delivered worldwide within a couple of days. Alan emails customers with a consignment note number so that they can monitor the progress of their shipment via the DHL Parcel Tracking site on the Internet. There is a link to DHL from the Boots Online Main Menu.

4.2 Online Communication Must be More Explicit than Interpersonal Communication

Comparing the communication processes involved in a physical and online business, Alan's boots business shows that the critical difference between interpersonal and online communication is that when communicating online, all the information needs to be conveyed explicitly. Each question asked, or unasked, needs to be consciously answered. Explicitness is particularly important with

online communication, as unlike face-to-face and telephone interactions, there is no implicit information being conveyed through body language, voice quality, tone and actions.

Meaningful interpersonal communication rests on an understanding of what is being said and what is not being said. Face-to-face interaction and telephone conversations are able to give a greater sense of what has been left out. With online communication, the context needs to be spelt out, rather than taken for granted.

The changes seen in online communication are similar to those that occur with the computerisation of work processes. As Soshana Zuboff (1988)²² has argued, the first effect of computerisation is the automation of tasks that were previously performed physically. The more far-reaching impact is that of *informating*, that is giving information about the discrete work processes, which in turn changes the way work is done.

The conscious spelling out of what is being said enlarges the information dimension of activities to the extent that it is information about the action that becomes the overarching framework for the action. It also draws attention to the component actions that comprise an area of activity. Instead of thinking in terms of selling or buying, for instance, the focus shifts to the actions that make up selling or buying.

The selling and buying process hinges on giving appropriate information to the customer in a way that he or she can understand and trust that information. In a physical store, a customer walks in, browses, absorbs the information about the goods on sale from the layout, the variety and the price tags. A salesperson may ask if the customer needs assistance and the customer might take up or decline the offer. If the customer buys something at the store, there may be some information sought and given. It is then a matter most often of paying the money, the money being received, a receipt issued and the customer taking delivery of the goods bought. This face-to-face purchase has been rich in information, but not all of it was consciously sought or overtly given. Much of the information is received, without the questions being asked, from the physical surroundings, the behaviour of the staff, and the prices on display.

When this shopping experience is translated online, at each point Alan must knowingly give the information that the customer has not asked for, but information that would help the customer trust the online provider. On the Internet, informing the client becomes a series of different activities, such as giving the history of the product, describing the range, showing how the customer can assess which is the right product for his or her needs, giving references to other customers' experience, price information, and information about the provider. Added to this is the particular information that the customer requests.

This information needs to be complete in itself, because the Internet allows the customer to navigate the site through hypertext, and thus the linear pattern of printed and spoken communication is broken.²³

In Figure 5, we track the differences in the way Alan communicates with his customers in the physical boot store and the online boot business. In order to retain control of his own business and engender trust in the online context, he has to go through discrete *informating* actions to retain

²² Zuboff, S. (1988). *In the Age of the Smart Machine: The future of work and power*. New York: Basic Books.

²³ See Newhagen, John E. and Rafaeli, Sheizaf. Why communication researchers should study the Internet: A dialogue, <http://jcmc.huji.ac.il/vol1/issue4/rafaeli.html>, as at 3 September 1997.

authority while also giving the customer sufficient control, comfort and caring with the communication and the transaction. It is this change in the nature of information and activity that makes online communication such a fundamental change in the way business is done in an online world.

Alan's experience is similar to Nigel's, who operates a Shareware business. Nigel is conscious that his email communication with his customers must be very explicit. He says:

..the language [customers] use might not be immediately obvious to you, you might have to sit down and think about what they're saying or what they're trying to say in what to them might be a foreign language and being prepared to deal with people in their second languageYou've really got to put yourself in the user's shoes and say this is what I think they mean....I went into a lengthy explanation of something and the user said, no I know all that but this is what I wanted. So you've got to cut through to that straight away.

4.3 Engendering Trust Online

Trust is at the very centre of the use of electronic commerce, although trust is difficult to define. At one level, trust means an absence of questions and a willingness to accept certain things on faith. Businesses know when there is a lack of trust, however, it is not clear how to engender trust and convey the desired meanings over new channels of online communication.

Policy and industry discussion has concentrated on the need to increase security in transactions through encryption and warranting structures and establish the authenticity of the customer. These are obviously important, but are issues of *hard trust*. Issues of *soft trust* deal more with control, comfort and caring.²⁴

Alan does not talk of engendering trust, but his experience is useful for tracking how a small business person can use the distinctive aspects of email, the Web page, and the telephone to engender trust and build a loyal customer base.

The first step is to understand that selling online is primarily an information activity. The information needs to be explicit and comprehensive, not only of the product sold but also of the lifestyle associations of the product. The information given must reassure the customer that he or she will be able to choose the right pair of boots for their needs. Information about assessing size gives control to the customer.

The second step is to establish a community of customers and transparent means of redress. Alan has been more successful with the first part. Reading of other customers' satisfaction is comforting. Customers also know the boots can be returned. The one disadvantage of distance at present is that Alan is unable to bear the cost of the return postage. This issue has already arisen once.

The third step is to use email and the telephone to nurture a personal relationship with the customer. His photograph on the home page, the telephone call to the customer, repeated emails

²⁴ For a more detailed discussion, see Bollier, D. (1996). The future of electronic commerce: A report of the Fourth Annual Aspen Institute Roundtable on Information Technology. Aspen, Colorado: The Aspen Institute, p. 21 and Singh, S. and Slegers, C. (1997). Trust and electronic money. Policy Research Paper No. 42. Melbourne: Centre for International Research on Communication and Information Technologies.

answering queries about the product and how it will match the customer's needs all give comfort across distance.

The fourth step is to enable the customer to be in control of the transaction – ordering, paying and receipt of the boots. Email has the immediacy that gives control. The Web page allows the customer to track his or her boots and know when they will arrive. Payment options do not lock the customer into a way of paying that is not comfortable. It is these steps to engender trust that also reassure Alan that he will have a business when faced with global competition.

Figure 5: Online Selling and Physical Selling: Retailing boots online

Selling boots	Physical store	Online store	Engendering Trust
Attracting the customer	Designing the store Advertising	Designing the web site. Listing with search engines Advertising online and other media	
Information about boots	Interpersonal information Visual and aural information Price tags Brochures	Giving information on the web site and/or email about: History of the boots Descriptions of boots sold Information about assessing size Information about experience of other customers Price information Photograph of provider Email as to particular questions and concerns of individual customers	Comfort Control Comfort Control Comfort Caring
Ordering boots	Interpersonal	Email order Provider telephones to authenticate order and ensure payment	Control Comfort
Payment Receipt	Interpersonal	Give credit card number by email, fax or telephone. Notify customer that payment has been received	Control
Delivery	Interpersonal	Notify that goods have been sent Customers can track their goods on the Web Customers at times use email to respond to goods received Place those comments back on the Web to develop a community of customers	Control Control Comfort Comfort/Caring
Servicing customers	Interpersonal Flyers/Brochures	Individual queries by email Web-page for upgrades or further developments with the product Information about new products	Caring/Control Control Control
Selling to existing customers	Interpersonal	Giving information on the web site or email... Entertaining correspondence	Comfort Caring

4.4 The Customer Base is Recognised as the Main Asset

All businesses, physical and online, need customers for their survival and profitability. When a business is online, knowledge of and communication with the customer becomes even more important as customers can more easily shift away from a supplier to a wider range of global competitors.

The vital importance of Alan's customers emerged during a role play session in the Retail and Wholesale Trade Industry workshop. He was faced with a competitor who copied his Web site and undercut his prices by 10 percent. He was also faced with the possibility that RM Williams might offer the boots direct to the customer. There also could be boot brokers who could access boots from all over the world through links to all suppliers. Clearly the uniqueness of his boots would not be enough to beat these competitors.

Alan says his business is likely to survive in the face of such competition because he has a satisfied customer base to sell more of the same and new products. At present, 30 percent of his customers are repeat customers. With this trust has come the establishment of a personal relationship with the customer that at times persists beyond the particular transaction. Alan tells of a customer who emailed him for advice on a ranch tour of Australia. Alan says this made him realise that many of his customers would also be interested in that information because boots are part of a life-style. So now he links his web site to the Australian Stockman's Hall of Fame and Outback Heritage Centre at Longreach in Queensland. With an emerging understanding that many customers are attracted to Australia's pioneer heritage, Alan's business has now diversified from boots to stockman's hats, belts, moleskins and all-weather coats. His Website is tailored to reflect and attract more of this type of customer.

It is this kind of customer communication and knowledge that will enable online businesses to establish niche markets globally despite the absence of internationally known brands.

5. A User Focused Framework for Strategy and Policy

The stories of small businesses as users of electronic commerce illustrate the complexity of communication choices in small business. The main implication of our study for policy and strategy is that the economic, technological and supply side story of electronic commerce needs to be complemented by the study of the way people use electronic commerce within their social and cultural contexts.

5.1 Main Findings of our Study

Our study focuses on the activities of small business, leading to an emphasis on the way people mix and match communication channels to communicate with different audiences. The choice is dictated by the fit between the characteristics of the communication channel, the nature of the activity, the audience to whom the communication is addressed, and the meanings ascribed to these different ways of communication.

Hence, Internet communication is favoured in some activities and for some audiences, while traditional face-to-face interaction or the telephone and the fax are channels of choice for other activities. It is only when there is a fit of channel, activity and meaning that issues of cost effectiveness, efficiency and competitiveness become important.

Our study also shows that as a distinctively different communication channel, the Internet is indeed changing the way business is done. Differences such as its greater speed, availability, lower cost and the ability to work together, can be tracked to its digital characteristics. However, the Internet is also different because meaningful and trusted communication requires the explicit sharing of information. There is no sense of what is not being expressed. This greater explicitness and intensity of information changes the content of business activities. The information component of activities such as ordering and payments increases. Therefore, business is done differently, not only in the way customers are accessed and served, nor just in the way costs are distributed, but in the way meanings are made online.

5.2 Connecting Partial Stories

Our user and activity story, like the supply and technology focused stories, is partial. A failure to recognise that both the users' and providers' perspectives are partial means the partial story will be mistaken for the whole - hence the need to connect the providers and users' perspectives.

Bridging the two perspectives involves complementing the focus on business efficiency, security and competitiveness with a corresponding emphasis on communication, trust and meaning. The languages and frameworks of economics and engineering are thus connected with those of sociology and communication.

Within this framework, our study suggests that policy makers and providers are more likely to increase online access and its effective use if:

- They promote electronic commerce as part of a mix of communication options. Thus electronic commerce is seen as one way to enhance business activities and communication;

- The Internet is recognised as a new way of communicating meaning and engendering trust. It is this distinctiveness that has the potential to change the way business is done and redefine business activities;
- The take-up and use of electronic commerce is linked to increasing trust in online communication; and
- The effective use of electronic commerce is regularly monitored.

Electronic commerce, therefore, becomes an issue not just of business efficiency and global competitiveness, but also of government and industry working towards enhancing trust and meaning via new communication channels.

Table 1: Characteristics of Small Businesses

Small business characteristics	Sample (N=27)	Australia (N = 887,318*)
No of employees (% of non-agricultural):		
Under 5		
5-20 (to 100 for manufacturing)	18 (67%) 9 (33%)	85% 15%
Sector		
Agricultural	-	11%
Non-agricultural	27 (100%)	89%
Industry division (as % of non-agricultural)		
Mining	-	0.3%
Manufacturing	2 (7.4%)	8.6%
Construction	1 (3.7%)	19%
Wholesale	7 (25.9%)	6.4%
Retail	5 (18.5%)	17.1%
Transport/storage	-	5.6%
Finance & insurance	-	2.6%
Property & business	12 (44.4%)	16.7%
Health and community services	-	6.8%
Cultural & recreational services	-	3.5%
Personal & other services	-	7.0%
Education	-	2%
Accommodation, cafes and Restaurants	-	3.2%
Annual turnover		
Less than \$500,000	8 (62%)	Not Available
More than \$500,000	5 (38%)	Not Available
Undisclosed/not asked	14	
Geographical Distribution		
Urban	20 (74%)	Not Available
Rural and regional businesses	7 (26%)	Not Available

Source: Australian Bureau of Statistics. (1995). *Small Business in Australia*. Catalogue No. 1321.0. Canberra: Australian Government Publishing Service.

* Total number of small businesses in Australia. The total number of non-agricultural small businesses in Australia is 785, 800.

Table 2: Social Characteristics of Proprietors of Small Business

Social characteristics	Sample* (N=27)	Small businesses in Australia
Gender		
Male	22 (82%)	73%
Female	5 (18%)	27%
Age		
Less than 30	7 (27%)	12%
30 - 50	14 (54%)	65%
over 50	5 (19%)	23%
Not asked	1	
Education		
Not completed secondary school	3 (11%)	1%
Completed highest year secondary school (no other study)	5 (18%)	41%
Gained basic or skilled vocational qualification	3 (11%)	33%
Gained degree or diploma	16 (59%)	25%
Country of birth		
Australia	19 (70%)	72%
Overseas	8 (30%)	28%

Source: Australian Bureau of Statistics. (1995). *Characteristics of small business in Australia*, Catalogue No.8127.0. Canberra: Australian Government Publishing Service.

* Five out of 27 small business people we interviewed were not proprietors of the business.

Table 3: Ownership of Information Equipment in Small Businesses

Ownership of Information Equipment	Sample (N=27)	Small businesses in Australia
PCs	25 (93%)	74% ^a
Modem	22 (81%)	42% ^a
Fax	26 (96%)	86% ^b
Single or two telephone lines	15* (60%)	NA
More than two telephone lines	10* (40%)	NA
Mobile phones	17** (71%)	81% ^b

a Source: Yellow Pages Australia. (April, 1998). *Survey of e-commerce in Australian small and medium businesses*. Small Business Index. Melbourne: Telstra Corporation Limited.

b Source: Yellow Pages Australia. (August, 1997). *A special report on technology in the small business sector*. Small Business Index. Burwood, Vic.: Yellow Pages Australia.

* Calculation is for 25 firms as two firms were not asked.

** Calculation is for 24 firms as three firms were not asked.

Table 4: Use of Internet Communication in Small Businesses

Use of Internet Communication	Sample (N=27)	Small businesses in Australia
Home page (existing)	9 (33%)	12% ^a
Home page (under construction)	3 (11%)	Not available
Email	18 (67%)	
Connected to Internet	16* (59%)	34% ^a

a Source: Yellow Pages Australia. (April, 1998). *Survey of e-commerce in Australian small and medium businesses*. Small Business Index. Melbourne: Telstra Corporation Limited.

*Our sample was asked "Do you have a browser such as Netscape to search the Internet?"

Figure A2.1: Small Businesses' Communication Options

Newest service Taken -up	Communication Options	Businesses	Industry	Main business activity	Education of Business person	Age of business person
Home page	Home Page/Email/ Modem/PC Fax/ Telephone/ Mail/ Face-to-face	1. Alan 2. Nigel 3. Mike 4. Phil 5. Evan 6. Rick 7. Sandra 8. Jake 9. Martin	Retail Retail Wholesale Manufacturing Business Services Business Services Business Services Business Services Business Services	Shoes Software Pumps Heat equipment Software Web design Web design Consultant Consultant	Secondary Degree Degree Degree No Secondary Degree Degree Degree Degree	50+ Under 30 Under 30 30-50 30-50 Under 30 Under 30 30-50 30-50
	As above, but home page is under construction	10. Quentin 11. Leon 12. Oliver	Retail Business Services Business Services	Computers Virtual reality Technical writer	Degree Degree Secondary	Under 30 30-50 50+
Email	Email/Modem PC/Fax/ Telephone/ Mail/ Face-to-face	1. Naomi 2. Steve 3. Dave 4. Frank 5. Hamish 6. Keith	Wholesale Business Services Business Services Business Services Business Services Manufacturing	Food Accountant Engineer Sound engineer Lawyer Meters	Degree Degree Degree Degree Degree Degree	NA 50+ 30-50 30-50 30-50 30-50

continued

Newest service Taken -up	Communication Options	Businesses	Industry	Main business activity	Education of Business person	Age of business person
Modem	Modem/PC/ Fax/Telephone/ Mail/ Face-to-face	1. Greg 2. Ian 3. Brendan 4. Ellen	Wholesale Wholesale Wholesale Wholesale	Farm supplies Tractors Farm supplies Farm machinery	Secondary Vocational Secondary Degree	30-50 30-50 50+ 30-50
PC	PC/Fax/ Mail/Telephone Face-to-face	1. Brett 2. Joe 3. Katya	Business Services Construction Wholesale	Accountant Plumber Metal fabrication	Degree Vocational No Secondary	Under 30 30-50 50+
Fax	Fax/Telephone/ Mail/ Face-to-face	1. Carol	Retail	Clothes & craft	Secondary	30-50
Telephone	Telephone/Mail/ Face-to-face	1. Dino	Retail	Grocer	No Secondary	Under 30

Figure A2.2: Setting up a Home Page, Email, World Wide Web and/or Modem

Service	Businesses	Reasons for Take-up*					
		Cost-benefit analysis	Strategic plan	Creation/selling of product/service	Communication with customers/suppliers/govt	Being Connected	Comfort
Home page	Alan	No	No	Yes	Yes (future customers)	Yes (fear may not have a business)	Yes -computer expertise
	Nigel	No	No	Yes	Yes	Yes	Yes – computer expertise
	Mike	No	No	Yes – overseas customers	Yes (overseas customers)	Yes	Yes – computer expertise
	Phil	Yes	No	Yes – overseas customers	Yes (overseas customers or for design files)	Yes	Yes – MD’s son had expertise
	Evan	No	No	Yes, brochure for wares	Yes	Yes	Yes – computer expertise
	Rick	Yes	Yes	Yes, brochure for wares	Yes	Yes	Yes – computer expertise
	Sandra	Yes	Yes	Yes, brochure for wares	Yes	Yes	Yes – computer expertise
	Jake	No	No	Yes, brochure for wares	Yes	Yes	Yes – computer expertise

continued

Service	Businesses	Reasons for Take-up*					
		Cost-benefit analysis	Strategic plan	Creation/selling of product/service	Communication with customers/suppliers/govt	Being Connected	Comfort
	Martin	No	No	Yes	Yes	Yes	Yes – computer expertise
	Quentin	No	No	Yes	Yes	Yes	Yes – computer expertise
	Leon	No	No	Yes (brochure for wares)	Yes	Yes	Yes – computer expertise
	Oliver	No	No	Yes (brochure for wares)	Yes	Yes	Yes – computer expertise
Email	Naomi	Yes – but tempered by cultural factors	No	Yes	Yes	Yes	Yes – use with friends and family
	Steve	No	No	Yes	Yes – suppliers dictated it.	No (Is already on the Net through a professional association, but does not want more customers)	Yes – son has expertise

continued

Service	Businesses	Reasons for Take-up*					
		Cost-benefit analysis	Strategic plan	Creation/selling of product/service	Communication with customers/suppliers/govt	Being Connected	Comfort
	Dave	No	No	Yes	Yes	Yes	Yes – computer expertise
	Keith	Yes	No	Yes – working on design files	No – existing customers not on the Net. Considering going on the Net for potential overseas customers	Yes	Yes - expertise
World Wide Web	Frank	No	No	Yes – accessing the latest legislation	Yes	Yes	Yes – computer expertise
	Hamish	Yes	No	Yes - researching his field of sound engineering	Yes	Yes	Yes – expertise

continued

Service	Businesses	Reasons for Take-up*					
		Cost-benefit analysis	Strategic plan	Creation/selling of product/service	Communication with customers/suppliers/govt	Being Connected	Comfort
Modem	Greg	No	No	No	Yes - suppliers	No	Yes – Trade association
	Ian	No	No	No	Yes - suppliers	No	Yes – Trade association
	Brendan	No	No	No	Yes - suppliers	Yes (his competitor is on the Net)	Yes – Trade association
	Ellen	No	No	No	Yes - suppliers	No	Yes – husband has computer expertise

* Those in bold are the trigger factors.

Figure A2.3 Factors Blocking the Take Up of Online Services

Businesses	Reasons blocking take-up		
	Lack of comfort	Not used in creating or selling the product or service	Customers/Suppliers do not communicate online
Brett	Experimenting with email at home but it is not working properly	Accounts are in one office	Face-to-face relationships are very important. But will have to take up email because his customers are asking for it.
Joe	No expertise	Plumbing business	Face-to-face relationships dominate. Customers and suppliers are not on the Net.
Katya	Some expertise.	Metal fabrication	Face-to-face relationships dominate, supplemented by fax Customers and suppliers are not on the Net.

continued

Businesses	Reasons blocking take-up		
	Lack of comfort	Not used in creating or selling the product or service	Customers/Suppliers do not communicate online
Carol	<p>Did not want the impersonality of the computer world.</p> <p>Also no computer expertise</p>	Retail crafts. But is seeing it as possibly useful after friends talked about it.	<p>Face-to face relationships in the main</p> <p>Customers and suppliers are not on the Net.</p>
Dino	No awareness or expertise	Grocery store	<p>Face-to face relationships only.</p> <p>Customers and suppliers are not on the Net.</p>

Figure A3.1: Use of Communication Channels across Groups

No.	Businesses	Industry	Customers	Suppliers/Service Providers	Within the Business	Government
<i>Businesses with a Web page and email</i>						
1.	Alan	Retail	Web page; Email; Telephone; Courier	Fax; Face-to-face; Telephone; Mail; Cheque	Face-to-face	Mediated through service providers
2.	Nigel	Retail	Email; Web page; Newsgroups; Mail	Face-to-face; Telephone	No employees	Mediated through service providers
3.	Mike	Wholesale	Face-to-face; Telephone; Fax; Mail; Web page; Email	Face-to-face; Telephone; Fax; Mail	Face-to-face; Telephone; Email	Mediated through service providers
4.	Phil	Manufacturing	Face-to-face; Telephone; Fax; Mail; Web page; Email	Face-to-face; Telephone; Fax; Mail	Face-to-face; Telephone	Mediated through service providers
5.	Evan	Business Services	Face-to-face; Telephone; Email; Web page; Fax; Mail	Face-to-face; Telephone; Fax; Mail	Face-to-face; Telephone; Email	Mediated through service providers
6.	Rick	Business Services	Face-to-face; Telephone; Email; Web page; Fax; Mail	Face-to-face; Telephone; Fax; Mail	Face-to-face; Telephone; Email	Mediated through service providers
7.	Sandra	Business Services	Face-to-face; Telephone; Email; Web page; Fax; Mail	Face-to-face; Telephone	Face-to-face; Telephone	Mediated through service providers

continued

No.	Businesses	Industry	Customers	Suppliers/Service Providers	Within the Business	Government
8.	Jake	Business Services	Face-to-face; Telephone; Email; Web page; Fax; Mail	Face-to-face; Telephone; Fax; Mail	No employees	Mediated through service providers
9.	Martin	Business Services	Face-to-face; Telephone; Email; Web page; Fax; Mail/Courier	Face-to-face; Telephone; Email; WWW; Fax; Mail	Face-to-face; telephone; email; mail/courier	Face-to-face; telephone; WWW; fax; mail (Government is also a customer)
<i>Businesses with email and constructing a home page</i>						
10.	Quentin	Retail	Face-to-face; Telephone; Email; Web page; Fax; Mail	Face-to-face; Telephone; Fax; Mail	Face-to-face	Mediated through service providers
11.	Leon	Business Services	Face-to-face; Telephone; Email; Fax; Mail	Face-to-face; Telephone; Fax; Mail; email	No employees	Mediated through service providers
12.	Oliver	Business Services	Face-to-face; Email; Telephone; Fax; Mail	Face-to-face; Telephone; Fax; Mail; Email	Face-to-face	Mediated through service providers
<i>Businesses with email</i>						
13.	Naomi	Wholesale	Face-to-face; Telephone; Fax; Mail; Email	Face-to-face; Telephone; Fax; Mail	Face-to-face	Face-to-face; telephone; mail
14.	Steve	Business Services	Face-to-face; Telephone; Fax; Mail	Modem-to-Modem; Email; Face-to-face; Fax; Telephone; Mail	Face-to-face	Modem-to-modem; telephone; mail

continued

No.	Businesses	Industry	Customers	Suppliers/Service Providers	Within the Business	Government
15.	Dave	Business Services	Email; Fax; Telephone; Mail	Face-to-face; telephone; fax	No employees	Mediated through service providers
16.	Frank	Business Services	Face-to-face; Telephone; Fax; Mail	Face-to-face; email	No employees	Face-to-face (Government is also a customer)
17.	Hamish	Business Services	Face-to-face; Telephone; Fax; Mail	WWW; Mail	Face-to-face; Telephone	WWW; Mail (Government as source for legal research)
18.	Keith	Manufacturing	Face-to-face; Telephone; Fax	Email; WWW; Face-to-face; Telephone; Fax	Face-to-face; email; telephone	Face-to-face; telephone (Government is a customer)
<i>Businesses with modem-to-modem communication</i>						
19.	Greg	Wholesale	Face-to-face; Telephone; Fax; Mail	Fax; Telephone; Modem-to-modem; Face-to-face	Face-to-face; telephone	Mediated through service providers
20.	Ian	Wholesale	Face-to-face; Telephone; Fax; Mail	Fax; Telephone; Modem-to-modem; Face-to-face	Face-to-face; telephone	Mediated through service providers
21.	Brendan	Wholesale	Face-to-face; Telephone; Fax; Mail	Fax; Telephone; Modem-to-modem; Face-to-face	Face-to-face; telephone	Mediated through service providers
22.	Ellen	Wholesale	Face-to-face; Telephone; Fax; Mail	Fax; Telephone; Modem-to-modem; Face-to-face	Face-to-face; telephone	Mediated through service providers

continued

No.	Businesses	Industry	Customers	Suppliers/Service Providers	Within the Business	Government
<i>Businesses with no modems</i>						
23.	Brett	Business Services	Face-to-face; Telephone; Fax; Mail	Fax; Telephone; Face-to- face	Face-to-face; telephone	Telephone; Mail; Face-to- face
24.	Joe	Construction	Face-to-face; Telephone; Fax; Mail	Face-to-face; Telephone; Fax	Face-to-face; telephone	Mediated through service providers
25.	Katya	Wholesale	Face-to-face; Telephone; Fax; Mail	Fax; Telephone; Face-to- face	No employees	Mediated through service providers
26.	Carol	Retail	Face-to-face; Telephone	Face-to-face; Telephone; Fax	Face-to-face	Mediated through service providers
27.	Dino	Retail	Face-to-face; Telephone	Face-to-face; Telephone; Fax	Face-to-face	Mediated through service providers

Figure A4.1: Use of Communication Channels for Payments

No.	Businesses	Industry	Receiving payments	Making payments
Paying predominantly by cheque				
1.	Alan	Retail	Credit cards over the Internet	Cheques; Cash
2.	Nigel	Retail	Cheques	Cheques
3.	Mike	Wholesale	Cheques; Direct credit	Cheques
4.	Evan	Business Services	Cheques; Direct credit	Cheques
5.	Sandra	Business Services	Cheques	Cheques; Credit card
6.	Jake	Business Services	Cheques; credit cards; Direct credit	Cheques; Credit cards
7.	Martin	Business Services	Cheques; Direct credit	Cheques
8.	Quentin	Retail	Cheques; EFTPOS; Direct credit; credit cards; cash	Cheques; cash
9.	Oliver	Business Services	Cheques; credit cards	Cheques;
10.	Naomi	Wholesale	Telegraphic transfer; direct credits	Cheques
11.	Steve	Business Services	Cheques; Direct credit; Credit cards; cash	Cheques; cash; EFTPOS
12.	Dave	Business Services	Cheques; Direct credit	Cheques
13.	Hamish	Business Services	Cheques; Cash	Cheques
14.	Greg	Wholesale	Cheques; Direct credit	Cheques
15.	Brendan	Wholesale	Cheques; Cash; EFTPOS Credit Cards; Direct credit	Cheques
16.	Ellen	Wholesale	Cheques; Cash; EFTPOS; Credit Cards; Direct credit	Cheques
17.	Brett	Business Services	Cheques; Credit cards	Cheques; Cash; Credit Cards
18.	Joe	Construction	Cheques	Cheques

continued

No.	Businesses	Industry	Receiving payments	Making payments
19.	Katya	Wholesale	Cheques; Direct credit; Cash	Cheques
20.	Carol	Retail	EFTPOS; cash; credit cards	Cheques
<i>Paying by cheques and direct debit</i>				
21.	Ian	Wholesale	Cheques	Cheques; Direct debit
22.	Rick	Business Services	Cheques; Direct credit	Cheques; Direct debit; Credit card
23.	Phil	Manufacturing	Cheques; Direct credit	Cheques; Direct debit
<i>Paying by cheques and credit cards on the Internet</i>				
24.	Keith	Manufacturing	Cheques; direct credits	Cheques; Credit cards on the Internet
25.	Frank	Business Services	Cheque	Cheques; Credit card over the Net
Paying predominantly by credit card				
1.	Leon	Business Services	Cheques; Direct credit; credit cards	Credit cards; cheques; direct debit
Paying predominantly by cash				
1.	Dino	Retail	Cash	Cash; cheques

About the Authors

Dr Supriya Singh is a Principal Research Fellow at CIRCIT. She holds a Ph.D in Sociology and Anthropology from La Trobe University. She was awarded the Jean Martin Award by the Australian Sociological Association for the best Social Science thesis in Australia for 1993-95. The thesis has been published by Allen and Unwin in 1997 as *Marriage Money: The Social Shaping of Money in Marriage and Banking*. This follows her previous books on banking history in Malaysia and Australia, *Bank Negara Malaysia: The First 25 Years, 1959-1984* (Bank Negara Malaysia: 1984) and *The Bankers* (Allen and Unwin: 1991) and a study of Simunul Bajaus in Borneo, *On the Sulu Sea* (Angsana Publications: 1984).

At CIRCIT, she heads the research programme *Understanding the Use of Information and Communication Technologies* and is developing CIRCIT's *Money across Cultures* programme. Dr Singh was invited in 1996, 1997 and 1998 to present her research at the Telecommunications Policy Research Conference in Maryland, USA; at Princeton University's Department of Sociology Workshop on Economic Sociology; at the Center for International Affairs, Harvard University; and at the Pacific Telecommunications Conference, Hawaii.

Since 1993, Dr Singh has represented consumers on the Australian Payments System Council which advises the Federal Treasurer about developments in the payments system. In 1997, she was also invited by the Australian Taxation Office to be part of a consultative group on Electronic Commerce.

Claudia Slegers is a Researcher at CIRCIT. She completed her BA in Social Sciences and a Graduate Diploma in Social Survey Methodology at La Trobe University. At CIRCIT she has been working in the area of *Understanding the Use of Information and Communication Technologies*, and is particularly interested in the connection between communication technologies and language, meaning and culture.

She has been a consultant for NUD·IST qualitative analysis software (Non-numerical Unstructured Data Indexing Searching and Theorising) at Qualitative Solutions and Research. In 1996-1997 she co-authored *Passing First Year University: Perceptions of Key Stake-holders* for the Department of Access and Preparatory Learning, Royal Melbourne Institute of Technology and University of Melbourne.