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Alison E. Norris

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**Government-initiated Community Website Schemes:  
What can we learn from the implementation of an Australian model?**

A thesis submitted in fulfilment of the  
requirements for the award of the degree

**DOCTOR OF PHILOSOPHY**

from

**THE UNIVERSITY OF WOLLONGONG**

by

**ALISON ELIZABETH NORRIS**

*Bachelor of Information & Communication Technology (Honours Class I) (UOW)*

*Graduate Diploma in Education (UNE)*

School of Information Systems and Technology

2007

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## **Abstract**

As the Internet has become integral to our daily lives, many community websites have been developed in an attempt to create ‘community’ online and to support traditional communities. These community websites were typically developed on an ad-hoc basis. In 2002, the Australian Domain Name Administrators responded to the lack of government-initiated, structured community website schemes by establishing the Community Geographic Domain Name (CGDN) Scheme. This Scheme created new domain names, solely for the use of community groups with the purpose of building community websites. Before gaining access to a CGDN, a community group must demonstrate their links to the community and meet numerous conditions.

To date, there has been limited research into the issues that affect government-initiated, structured community website schemes, and no studies have compared the experiences of multiple community websites developed under such schemes to identify factors that affect the viability of these websites and the schemes as a whole. This thesis aims to develop a deeper understanding of the issues associated with government-initiated, structured community website schemes, using an instance of such schemes: the CGDN Scheme. Using a case study approach, an analysis of the CGDN Scheme, and its viability, is completed. Through case studies of the three communities participating in the trial of the CGDN Scheme (Wollongong, New South Wales; Bathurst, New South Wales; and Ballarat, Victoria), rich qualitative data is collected from a variety of data sources about the experiences of the case study participants. Qualitative data is also collected from and about the CGDN management bodies and the CGDN Policy. Based on this data, issues faced by these case studies and by the CGDN Scheme management bodies are identified and their implications discussed.

To consolidate the findings of the case studies in a format that is easy for communities to manage and apply, the relationships between these issues are modelled, and the issues are grouped into eight categories: auDA and auCD, Policy, CGDN Project leadership, Publicity and advertising, Community involvement, Finance, Community Website Group and Infrastructure. These issues and factors are mapped using four models. A comparison of approaches chosen by the three test cases allows the implications of such decisions to be considered, and recommendations to improve the viability of the CGDN

Scheme are provided. Finally, recommendations for the establishment of government-initiated, structured community website schemes are presented. These recommendations provide a summary of the contribution that this thesis makes to a deeper understanding of government-initiated, structured community website schemes.

## **Thesis Certification**

I, Alison Elizabeth Norris, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Information Systems and Technology, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Alison Norris

13<sup>th</sup> November 2007.



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## List of Publications

*Note: Publications relevant to this thesis are marked with an asterisk (\*)*

\* **Norris, A.** and M. Freeman 2007, 'Community Domain Name Policy Development', *18th Australasian Conference on Information Systems (ACIS): the 3 Rs: Research, Relevance and Rigour - Coming of Age*, Toowoomba, Queensland, December 5-7 [forthcoming].

\* **Norris, A.** 2007, 'Community Geographic Domain Names' in A. Tatnall (ed.), *Encyclopedia of Portal Technologies and Applications*, Information Science Reference (IGI Global), Hershey, Pennsylvania. pp.157-161.

\* **Norris, A.** 2007, 'Community Website Sustainability: An Australian Perspective' in *Proceedings of the 2007 International Conference on Internet Computing (ICOMP'07)*, Las Vegas, USA, June 25-28.

\* **Norris, A.** and M. Freeman 2006, 'Community websites and what makes them sustainable: Evidence from Australia' in *Proceedings of the 10th Pacific Asia Conference on Information Systems (PACIS)*, Kuala Lumpur, Malaysia, July 6-9.

Freeman, M., **A. Norris** and P. Hyland 2006, 'Usability of Online Grocery Systems: A focus on errors' in *Proceedings of the OZCHI 2006 Conference. Design: Activities, Artefacts and Environments*, Sydney, New South Wales, November 20-24.

**Norris, A.** 2005, 'Information-based websites: A usability assessment of a library website', *Internet Research Annual*, vol.3, pp.159-169.

**Norris, A.** and M. Freeman 2005, 'Improving Library Website Usability: A User Focus' in *Proceedings of the neXt 2005: ALIA National Library and Information Technicians Conference*, Sydney, New South Wales, September 6-9.

\* **Norris, A.** 2004, 'A framework to support community portal financial sustainability' in *Proceedings of the Community Informatics Research Network Conference 2004*, Prato, Italy, Monash University & Community Informatics Research Network, September 29-October 1.

**Norris, A.** 2004, 'Information-based websites: A usability assessment of a library website' in *Proceedings of the 5th Annual Conference of the Association of Internet Researchers (AoIR) 2004*, Brighton, UK, September 19-22.

## List of key terms, abbreviations and definitions

(presented in alphabetical order)

Term	Abbreviation	Definition
.au Community Domains	auCD	The body responsible for the allocation and management of CGDNs.
Australian (.au) Domain Name Administrator	auDA	The policy authority and industry self-regulatory body for the .au domain space
Community Geographic Domain Name	CGDN	An Australian scheme that created a new second level domain name space of Australian geographic locations for the exclusive use of Australian local geographic communities.
Community Geographic Domain Name Policy	CGDN Policy	The legal document that specifies the rules of use for CGDNs.
Community Geographic Domain Name Project	CGDN Project	A practical, community-based application of the CGDN Scheme with the goal of producing a community website.
Community Geographic Domain Name Scheme	CGDN Scheme	Encompasses the CGDN Policy and the related processes and activities that are related to the implementation and use of CGDNs.
Community Informatics	CI	A field of research and practice concerned with technology projects that are designed to enhance community experiences.
Office of Information and Communications Technology	OICT	The state government department under which the OCOS Project was implemented.
One City One Site Project	OCOS Project	The Australian state government project that organised and managed the trial of the CGDNs.

# Chapter 1: Introduction

*“Communities are the bedrock of human development.”*

(Gurstein, 2004b, 2)

## 1.1 Introduction

Throughout history, the concept of community has been central to society's progress, and key to the formation of bonds between humans. The use of the Internet to develop community interaction has attracted much attention over the last decade. One such use of the Internet is the community website, which is claimed to enhance social relationships and increase local economic activity. Researchers such as Millen and Patterson (2002) assert that community websites provide a familiar and supportive environment for their users, allowing community members to interact and to access a wide range of community information sources and services (Lacher et al., 2001). Other researchers believe that this access to information and resources, in conjunction with enhanced community interaction, facilitates the development of increased levels of trust and the dissolution of barriers within the community (City of Seattle, 2000; Spencer and Neil, 2002). Spencer and Neil (2002) found that, when successful, community websites are viewed as community assets that are capable of enhancing existing social relationships, creating new social, professional and business links within the community, and providing economic benefits to consumers and businesses.

There have been many approaches to developing community websites; some private, some corporate, some community-driven, and some government-initiated. Many of these have not been particularly successful. Two of the major factors affecting the success of these projects are:

- the degree of preparedness of the group undertaking the project, and
- the level of funding that the group receives from sponsors or is able to generate itself.

While these factors affect all community website projects, they are of particular interest in government-initiated projects because of the two common approaches to government-initiated, community focussed website projects:



1. Significant provision of government funding ‘to’ or ‘for’ elements of the community, typically undertaken under the broad assumption that ‘money for technology will necessarily help communities’. Such projects usually provide little or no structure for the allocation of these funds and implementation of the projects. (One example of a highly-funded scheme lacking structure and accountability is Networking The Nation (Australian Government, 2003a).)
2. Little or no provision of government funding, with government involvement restricted primarily to providing structure (through guidelines or policies) for the development process to be followed by community groups. In many cases, the sole reason for a community group to become involved in such government schemes is the legitimisation and recognition of the community project provided by participation in a government scheme. (One example of a non-funded, highly-structured scheme is the Community Geographic Domain Name Scheme.)

The first approach, involving government provision of significant funding, was popular in the early 2000s. Such funding is useful in setting up the community website, but often makes the community group dependent on government funding. The second approach, in which governments require community groups seeking funding to demonstrate their ability to become self funding, requires a greater degree of preparedness. This approach was developed in response to costly failures of similar initiatives (see figures for Networking the Nation scheme in Section 1.2 as one example). Both these approaches have met with varying degrees of success.

An interesting and apparently successful government-initiated scheme was recently introduced in Australia, called the Community Geographic Domain Name (CGDN) Scheme. Unlike earlier Australian schemes (which used the funding-only approach), the CGDN Scheme did not receive significant government funding, nor did the community websites set up under this Scheme receive direct government funding. Instead, they were offered a unique set of domain names which were intrinsically valuable (hence, providing legitimacy to the community groups involved). To be given one of these domain names the website group was required to demonstrate a high degree of preparedness before they could access these domain names. Moreover, the domain names were only available to bona fide groups which represented a local community.

Despite the significant potential of community websites, little guidance or management has been provided to the large number of individuals and community groups interested in developing these websites around the world. This lack of advice, management and structure for the development of community websites was recognized in 2002 by the Australian Domain Name Administrators (auDA), and reflected in the development of a rigid structure for the CGDN Scheme.

The existence of the CGDN Scheme raises two interesting research questions:

- What happens if a community website does not have initial funding? (e.g. government funding) and
- Does the insistence on a high level of preparedness make a community website any more likely to succeed?

While these questions are most significant in relation to government-initiated community website schemes, they are of relevance to the wider community website domain. This thesis will attempt to answer these questions, in part at least, and to apply those answers to the broader context of community website development.

A third question, concerning the role of government decisions, will be implicitly considered throughout this thesis, and directly addressed in the final two chapters.

- What is the impact of government project design on community project engagement and outcomes?

This research studied the development of the CGDN Scheme and the three communities that were involved in its trial, as an instance of government-initiated, structured community website schemes, to evaluate the viability of this new Australian model, to determine the issues associated with the implementation of the CGDN Scheme, and ultimately to develop a deeper understanding of the issues associated with government-initiated, structured community website schemes. As well as evaluating the success of a specific scheme for structured community website development (the CGDN Scheme), this research compares and contrasts three different implementations of structured community website development. Through consideration of the variations and implications of the three implementations, recommendations for the establishment of future, similar schemes are provided.

Inherent in the CGDN Scheme is the concept of pre-defined arbitrary geographic boundaries (as defined by the Australian government), which are used to specify the physical limitations of each 'community'. Such highly structured definitions of 'community' are in contrast to the evolving and intersecting nature of natural communities. The arbitrary definition of geographic boundaries and the assumption that these boundaries necessarily reflect natural communities are likely to have an impact on the potential success of the implementation of the CGDN Scheme.

This chapter provides an overview of the thesis. The chapter begins by presenting a background to the research problem, and describing the purpose and goals of the research. A description of the research methodology that will be used, and a discussion of the significance of the thesis, is provided. The thesis structure and the contents of each chapter in this thesis are then described in some detail.

## **1.2 Background**

As access to information technology, and specifically to the Internet, has increased globally in recent years, individuals and community groups have questioned how these resources can be used to facilitate community interaction and community development. Practical work and research in this area, involving the merging of social and technical issues, led to the development of a new field: Community Informatics (CI). CI projects, and specifically community websites, are typically concerned with developing social benefits such as increased social capital and increased community interactions, as well as increased access to information, a sense of community and decreased cultural divisions. These projects use various types of technology to directly or indirectly facilitate such social benefits.

The term 'Community Informatics' was initially coined by Michael Gurstein, and despite widespread use in the literature there is no agreed definition of the term or the field it seeks to describe (Stoecker, 2005a). A recent attempt to define the breadth of the field states that the objective of the field of CI "is to use [Information and Communication Technologies] ICT to enable the achievement of community objectives" (Gurstein, 2007, 11). The area of practical and theoretical work typically characterised as CI was developed by individuals with the desire to broadly implement

their commitment to the enhancement of community well-being using the support of ICTs. Prior to the establishment of CI, limited opportunities existed for the application of technologies to social issues. For further discussion of Community Informatics, see Section 2.3.

Interest in community websites has been noted globally because of their potential social and financial value. A community website can provide a range of content and services, and often includes current local news and the ability for community members to interact online. While a community website allows only online interaction between community members, it has been claimed that the social dynamics of such a community are often similar to those of a traditional face-to-face community (Kim, 2000). Community websites also provide an environment in which all members of a community can interact without the boundaries of time and distance (Kim, 2000), and meet people they would not interact with in their face-to-face interactions with the community. Despite this potential, many community websites never enable or achieve interaction between members. One of the weaknesses of some CI projects is that they are developed externally to the community and projects are completed ‘for’ that community, rather than ‘by’ or ‘with’ the community and its members. This lack of engagement and community input is often attributed as the reason for not achieving full community buy-in.

Countries such as Australia, Canada, South Africa and the United Kingdom have seen the development of numerous community websites, under a variety of funding structures, with varying levels of success. The diversity of interest in community websites is demonstrated by viewing popular Canadian community websites, such as those developed by geographic communities like Swansea in Toronto (<http://www.swansea.ca>), and those designed to bring together common interest communities such as Canada’s Christian Community Online (<http://www.christianity.ca>) and GayCanada (<http://www.gaycanada.com>). Interest in the United Kingdom is also high, with numerous examples of successful community websites (such as <http://www.bristol-link.co.uk>, <http://www.kingussie.co.uk>, <http://www.skye.co.uk> and <http://www.dunbar.org.uk>),. Websites helping communities to come online (see <http://www.community-world.co.uk> and <http://www.town.org.uk>) and central listings of existing community websites (<http://www.villagesonline.com>)

also exist. One Australian state saw the development of a highly successful state-funded portal, called 'My connected community' (<http://mc2.vicnet.net.au>), with the purpose of promoting the establishment of online communities through community websites (Vrazalic et al., 2003). Built under the 'Connecting communities: the second wave' framework (Multimedia Victoria, 2007), the project recognizes the potential of the Internet to enhance traditional communities. By August 2007, 3411 community websites had been established through 'My connected community' (My Connected Community, 2007).

The Australian government committed extensive funding to community-based Information and Communication Technology (ICT) initiatives in the late 1990s through the Networking the Nation (NTN) scheme (Australian Government, 2003a). By June 2000, 110 websites had been developed under its funding, with 37% of these being community websites (Vrazalic and Hyland, 2005). Despite high levels of available funds, the scheme was not effective in establishing sustainable projects. In one state 130 ICT projects were funded, with 42 of these failing to meet their stated goals in the specified timeframe at a collective cost of AU\$24.6million (Australian Government, 2003b). One review of the NTN scheme suggested the extensive problems were because groups receiving the funding "lacked the skills and expertise to implement many of the programs properly" (Young, 2001). Research has found no appropriate objective frameworks to evaluate community informatics projects, or to provide accountability for the resources provided to these projects (O'Neil, 2002). As a result of the high failure rate, the Australian Government determined that it was not viable to continue funding such projects.

While many successful community websites can be identified, many others have failed. Success, and sustainability, has been achieved on an ad-hoc basis, with minimal structured management or schemes (with the exception of 'My connected community') available to assist communities in the process of community website establishment. Sustainability has become a major concern for many involved in CI projects (Gurstein, 2004a). In response to demands from the Australian community for a structured approach to community website development, in 2002 auDA proposed a new, exclusive second-level domain name space for community websites. These new domain names were called Community Geographic Domain Names (CGDNs). The second-level

domains (2LDs), and their associated third-level domains (3LDs), are inherently logical in their structure (i.e. state/territory.au for 2LDs, and placename.state/territory.au for 3LDs) and as such are easy to remember and promote (e.g. sydney.nsw.au represents Sydney in the state of New South Wales, brisbane.qld.au represents Brisbane in the state of Queensland). Using a community's geographic location as the domain name is easily recognisable and understandable.

A draft CGDN Policy was developed during 2003. The CGDN Policy is the formal document governing the CGDN Scheme, specifying how the CGDN Scheme would be implemented. This CGDN Policy established strict guidelines describing the conditions under which a CGDN could be licensed. Working within the formal guidelines established in the CGDN Policy, the CGDN Scheme incorporated the goals, models, procedures and management structures, not all of which were fully specified in the CGDN Policy. The CGDN Scheme planned to provide management assistance, website development guidance, and legitimization to community websites developed under the scheme. The CGDN Scheme includes the following key principles: reserved geographic domain names, community only, not-for-profit, and broad representation. To test the CGDN Policy prior to the national release of the CGDNs, three Australian communities participated in a trial by forming a community group, applying for a CGDN, and developing a community website within the guidelines of the CGDN Scheme. The three communities that acted as 'test cases' (each of which is described as a CGDN Project) for the CGDN Scheme and CGDN Policy were:

1. Wollongong – a large regional city with 200,000 residents
2. Bathurst – a medium-sized country town with 30,000 residents
3. Ballarat – a large country city with 85,000 residents

### **1.3 Research Purpose & Goals**

The development and trial of the CGDN Scheme in Australia presented a unique opportunity to record the experiences of multiple communities conducting similar projects under a government-initiated, structured community website scheme. With each of the three communities having to comply with the same requirements, their experiences can be compared and issues impacting on their success, and subsequent

viability, more easily identified. The ability to record the communities' experiences from inception to the maintenance of a community website allowed for the identification of issues at all stages.

Each community test case was considered to be a 'CGDN Project' – an instance of the CGDN Scheme in practice. Evaluating each CGDN Project allows us to consider whether the CGDN Scheme is successful, and how the CGDN Scheme can be improved. It also allows us to learn about the experiences of communities undertaking the process of creating a community website, and consider whether issues faced are common across many communities. The opportunity to observe three comparable experiences informs the identification of relationships among observed issues.

Ultimately, the purpose of this research is to develop a deeper understanding of the issues associated with government-initiated, structured community website schemes, with this information used to increase the viability of such schemes. If the CGDN Scheme is capable of facilitating the development of viable community websites, it may serve as a world-leader in this space. The ability to compare and contrast the varied approaches of three communities developing community websites, in conjunction with the evaluation of the CGDN Scheme itself, allowed the formulation of recommendations to inform the establishment of government-initiated, structured community website schemes in the future.

There has been much discussion about the value and benefits of community websites in the literature, and as previously discussed these benefits were integral in the initiation of the CGDN Scheme. While research has shown that the perceived benefits of a community website are related to its long-term survival and sustainability, this research does not seek to provide judgment on whether community websites in general are beneficial, nor is it concerned with identifying the specific benefits (if any) of a community website.

Rather, this research aims to develop a deeper understanding of the issues associated with government-initiated, structured<sup>1</sup> community website schemes, and improve our understanding of the issues affecting the development, success and long-term viability of community websites developed under such schemes. In particular, this research will use the CGDN Scheme, which is an instance of such schemes, to further develop this understanding. The impact of initial funding and of enforced structure in such schemes will be considered, with the findings being useful to the design and implementation of community website schemes generally. Specifically, this research will focus on the role of government project design in influencing community project engagement and outcomes.

The research study has five distinct but closely linked goals.

- (i) To monitor the development of the national CGDN Scheme and Policy in Australia
- (ii) To compare and contrast various approaches to developing community websites within a government-initiated scheme, as observed through the CGDN Projects
- (iii) To evaluate the viability of the CGDN Scheme as an instantiation of government-initiated, structured community website schemes
- (iv) To develop a deeper understanding of issues faced by groups developing community websites
- (v) To understand how the design of government-initiated schemes affects community website project outcomes

## **1.4 Research Methodology**

The participation of three communities in the trial of the CGDN Scheme provided an opportunity to conduct research into the success of this new Australian scheme. This research used a multi-methodological case study approach to capture rich and detailed data from a variety of sources. Using a case study approach allows the issues that impact on the success and long-term viability of the CGDN Scheme and CGDN

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<sup>1</sup> While community website schemes have been previously implemented (see Section 2.4.3), they have commonly been limited to financial support and few have exhibited formal structures governing the actions of communities involved in the scheme.



Projects to be identified within their real-life context, without having to pre-define the boundaries of the research (Yin, 2003).

Three case studies will be used in this research because the trial of the CGDN Scheme involved three communities. While results from a single case study cannot necessarily be generalized, observing three case studies significantly reduces the issues associated with generalising results, allowing common experiences to be identified while providing the opportunity to note issues relevant to only specific communities. Due to the small number of sources from which to collect and compare data, it is not possible to derive statistically valid results, and it is therefore not appropriate to conduct quantitative analysis as part of this research. The community size, motivations and support mechanisms of the three case studies (described briefly in Section 1.2) are varied. Comparisons can be drawn between the case studies because their original mandate was identical, and their reporting in the early stages was uniform.

This research aims to develop a deeper understanding of the issues associated with government-initiated, structured community website schemes. In particular, this research will use the CGDN Scheme, which is an instance of such schemes, to further develop this understanding. Through research into the implementation of the CGDN Scheme, and case studies of various CGDN Projects, issues associated with government-initiated, structured community website schemes are identified. Models are then built, based on these findings, to identify issues affecting the viability of the CGDN Scheme.

Three components are therefore identifiable in the research methodology:

1. evaluation of the CGDN Scheme
2. evaluation of the CGDN Projects
3. building of models

While identifiable as three distinct components, it should be noted that each is not independent. The evaluation of the CGDN Scheme is partly informed by the evaluation of the CGDN Projects. The development of the models is an iterative process, informed by the evaluation of the CGDN Scheme and CGDN Projects.

The evaluation of the CGDN Scheme and CGDN Projects will use a multi-methodological approach, which allows the limitations of each method to be minimised through the use of a variety of methods in a single study (Creswell, 2003). The approach of triangulating data from multiple sources is popular in CI Projects (O'Neil, 2002; Myers, 2005), and was used in this research. The four main data types that can be collected in a qualitative study were included in this research; observations, interviews, documents, and audiovisual materials (Creswell, 2003).

The approach used, and specifically the analysis of data collected, was informed by grounded theory methods. Grounded theory methods have been identified as highly suitable to addressing socio-technical phenomenon (Mitrovic and Bytheway, 2006). While other methods common to structured data analysis in similar fields require the researcher to develop preconceived ideas, grounded theory allows the researcher to be guided by the data collected. Initial identification of issues was based on the concept of emerging issues analysis (based on the concept of trend analysis), which seeks to identify issues at an early stage in their development (prior to these issues becoming 'trends') (Molitor, 1977). Both grounded theory methods and emerging issues analysis allow for more 'honest' experiences to be identified and recorded, thereby ensuring that the findings of this research will be relevant to practitioners as well as informing academic discourse.

This research began in early 2004, as each of the test case projects was being initiated. The three test case communities received access to their respective CGDNs in early 2006, and the CGDN were made publicly available in August 2006. Evaluation of the test case projects ceased in August 2007, one year after the national launch and three years after observation of the communities began.

## **1.5 Significance**

This research provides an opportunity to analyse practice in the field of CI, and apply these findings to community project design, developing theory relating to the design of government-initiated community technology projects generally as well as theory specific to improving the active CGDN Scheme. One key goal of the field of CI has been identified as facilitating dialogue between policy makers, academics and

practitioners (Mitrovic and Bytheway, 2006); this goal is implemented in this research. While at some stages of the process this dialogue was not viewed as wholly successful, developments in 2007 demonstrated positive outcomes for community participants from this dialogue.

The inconsistency of the success of community websites and their lack of comparability has, to date, made it difficult to identify the factors that influence this success. While individual studies of successful community websites have identified factors that *may* have made the website successful, there has been no comparison of multiple, comparable community websites to provide informed opinions about success factors. This study provides a unique opportunity to conduct research on three community websites developed under consistent guidelines and limitations to compare and contrast their experiences. This comparability provides a basis upon which the impact of both internal and external issues can be determined. To support the discussion provided throughout this thesis, these issues and their relationships will be presented in the form of two models.

Evaluation of the three CGDN Projects also provides useful feedback on the CGDN Scheme. This CGDN Scheme was proposed as a response to the lack of advice, management and structure available to support the development of community websites. As described in Section 1.1, two general approaches to government-initiated, community focussed website projects can be identified: highly-funded but lacking structure, and highly-structured but lacking funding for communities. The first approach has been unable to consistently demonstrate the ability to produce community projects that are independently sustainable, because such projects become heavily reliant on government funding. This research will investigate one scheme based on the second approach: the CGDN Scheme is highly structured, but provides no financial support to communities involved. For the CGDN Scheme to be deemed a success, it must facilitate the development of sustainable community websites. Findings from this research will be useful in considering the role and impact of the level of initial funding, and the role and impact of requiring a high level of preparedness from communities prior to implementing community website projects. These findings will directly inform the design and implementation of the CGDN Scheme in the future, but will also be useful for informing the design of other government-initiated community technology projects.

Through the evaluation of the CGDN Scheme, components of this scheme which are transferable to other government-initiated community technology projects will be identified.

A comparison of the experiences of the three CGDN Projects and the implications of the decisions made in each are presented. Based on the experiences recorded through the trial of the CGDN Scheme, recommendations relating to the CGDN Scheme are provided. Conclusions from the evaluation of the CGDN Scheme and the CGDN Projects were used to inform general recommendations for the establishment of any government-initiated scheme for community website development.

The extensive evaluations of the CGDN Scheme and CGDN Projects, with the resulting recommendations for the CGDN Scheme and government-initiated schemes for community website development, and the supporting models, are useful for informing both practical and theoretical work in the Community Informatics field. This research provides insights for researchers involved in assessing community website success, and practitioners supporting community website development, by identifying key areas of concern. The case studies provide an insight into the process of community website initiation and development, which can be used by communities considering beginning a CGDN Project, and potentially used by any community developing a community website. This research provides a warning to policy makers about the importance of community involvement on relevant policies, and appropriate responses to community input. Specifically, it provides theories about the impact of funding and structure on community engagement and project outcomes for government-initiated community technology projects.

## **1.6 Organisation of this Thesis**

This thesis consists of nine chapters. **Chapter 1: Introduction** has presented a broad overview of this research including the background to the research, its purpose, the selected methodology, and the significance of the thesis.

**Chapter 2: Literature Review** presents a review of the relevant literature. The challenges of defining community and Community Informatics are discussed. The

relationships between traditional definitions of community and types of community on the Internet are considered. Issues identified in the literature as affecting the success and long-term viability of Community Informatics projects, and attempts to classify and map these issues, are presented. A detailed description of the Community Geographic Domain Name Scheme is then given, including the history of the CGDNs, the contents of CGDN Policy, the trial process, the reporting requirements and the evaluation of the CGDN Scheme.

**Chapter 3: Research Methodology** describes the research methodology that will be used to determine whether the CGDN Scheme can facilitate the development of sustainable community websites. After defining the research goals, the approach used to evaluate the CGDN Scheme and CGDN Projects, and develop models to describe the issues identified, is presented in detail.

**Chapter 4: Monitoring the CGDN Scheme and Policy** describes the original CGDN Scheme and CGDN Policy, as proposed in 2002. This original CGDN Policy, and specific characteristics of the proposed CGDN Scheme, are compared with the final CGDN Policy and CGDN Scheme characteristics. The impact of these changes, and feedback from test case members, are discussed.

**Chapters 5-7** present the experiences of the three CGDN Projects: **Wollongong**, **Bathurst** and **Ballarat** respectively. Activities and issues related to the establishment of each community website group are discussed. The processes of website development and management are described, and details of the community website launch presented. Experiences after launch, and medium-term issues are then addressed. The impacts of the CGDN Scheme requirements on each of the CGDN Projects are identified. Throughout each of these three chapters, issues experienced during the trial of the CGDNs will be identified. These issues are related to:

- the CGDN and geographic domains policies
- management of the CGDNs by .au Domain Administrators (auDA) and .au Community Domains (auCD)
- CGDN Project leadership
- publicity and advertising of the CGDN Scheme and CGDN Projects
- community involvement

- finance
- the Community Website Groups, and
- CGDN Website development and implementation.

**Chapter 8: Discussion & Lessons Learned** presents a summary of the issues identified in **Chapters 4-7**, and groups these issues using a grounded theory approach. Informed by the evaluation of the CGDN Scheme and CGDN Projects, models are developed to visually depict the relationships between the issues identified. The experiences of the CGDN Projects are then presented and compared. Recommendations and lessons relating specifically to the CGDN Scheme, to government-initiated community website schemes generally, and to the design of all community website schemes, are formulated.

**Chapter 9: Conclusion** draws together the key contributions and conclusions of this research, describes its significance, identifies the limitations of the study and provides suggestions for future research arising from this thesis.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

The previous chapter discussed the problems that are faced by communities when attempting to establish themselves online. These problems can be attributed to a number of issues that can be uncovered by further evaluation on what a community is and how these communities can be established in an online context.

To date, there has been limited research conducted on the success and failure of community website schemes. Initially this chapter will present a discussion on communities, community informatics and community websites, as there are several differing interpretations of each concept. This chapter then presents a review of the domain of community websites. This will be followed with the issues that may affect the viability of community websites.

### **2.2 Traditional Definitions of Community**

This research is focused on community websites, and the situations and schemes under which they are developed and used. However, in order to understand the domain it is necessary to have an understanding of what is meant by ‘community’. The term ‘community’ conjures up different ideas in different situations. ‘Community’ is defined differently by varied researchers and in different circumstances, with categorisations typically based on geography, common interest or a combination of both. Butcher (1993) argues that inherent in descriptions of communities is the need for people to have something in common, with Day (2002, 1) stating that “having ‘something in common’ provides us with our first sense of community”. Some suggest that a community requires individuals to interact on a face-to-face basis on a regular basis (Stoecker, 2005b), with the concept of shared cultural characteristics, political process, local issues, resources and space also common (Hopkins and Ewing, 2002; Stoecker, 2005b). Others argue that the concept of community is no more than a cultural construct (Ripamonti et al., 2005). While many definitions of the concept of ‘community’ can be found in the literature, Preece noted that the only common concept throughout all definitions of an online community was people (Preece, 2004). Butcher (1993) supports

this notion, stating that all members of a community must interrelate and recognise themselves as a member of that community, even if some members do not actively participate (Day, 2002). Communities can exist at different scales, and are not mutually exclusive (Hopkins and Ewing, 2002). It is possible, and indeed likely, that an individual would consider himself to be a member of multiple communities simultaneously.

While there is no agreed definition of a ‘community’ (Butcher, 1993; Benassi et al., 2004; Ripamonti et al., 2005), the term refers to a group of individuals. Inherent in descriptions of communities is the need for these individuals to have something in common (Butcher, 1993), although they are “naturally heterogeneous” (Day, 2002, 1). Stoecker (2005b, 88) suggests that a community may *begin* as “a conglomeration of individuals sharing a common geography but not interacting or defining themselves as a group.” Attempts to classify communities based on essential characteristics such as culture, socio-economic situation, behaviour, and social norms and values, have revealed that no two communities are alike (Day, 2002). Communities are traditionally classified into two distinct groups by social scientists: *geographic* (or ‘territorial’) communities, and *interest* communities (Butcher, 1993). Butcher (1993, 13) also notes that “Of course, some communities may be rooted in both shared locality *and* common interest”, however these two features will be treated separately in the following discussion of the two types of communities and their characteristics.

Members of geographic communities are classified as such based on their shared geographical location, or physical proximity to one another (Butcher, 1993). A member of such a community is required to live or work in the specified location (for example, a neighbourhood, city or region). The use of the term ‘community’ to describe a group of people within a certain geographical area is often interpreted as implying that individuals have a shared social base simply because they reside in a similar location (Butcher, 1993). This assumption is not always accurate (Beamish, 1995). It is possible for many sub-communities to exist within a geographic community. The CGDN project attempts to develop a shared social base for geographic communities, using the community website to “combat community fragmentation” (Romm and Taylor, 2001, 2869), counteract the “sense of disconnectedness” (Romm and Taylor, 2001, 2869) felt by many individuals, and increase offline interaction between community members.



An interest community is a community based on the concept that all individuals in the community have something other than physical proximity in common (Butcher, 1993). This shared characteristic may be a hobby, occupation, religion, ethnicity, or sexual preference (Butcher, 1993; "community", Cambridge University, 2003).

### ***2.2.1 Sense of Community***

Implicit in any community informatics discussion is the challenge of defining 'community', with a variety of definitions being proposed by researchers (Butcher, 1993; Adler, 1997; Day, 2002; Stoecker, 2005a). It has been suggested that often, the definitions provided are focussed too closely on internal community cohesion, and so do not acknowledge the importance of individual commitment and participation in a network (Crow and Allan, 1994 cited in O'Neil, 2002). However, other researchers argue that an online community can facilitate the redevelopment of internal social networks and support interaction between community members (O'Neil, 2002). Adler proposes the idea that communities are "'local' social groupings" (1997, 32), initially formed based on a shared interest or location, which broaden their interactions over time as community members get to know each other.

Gurstein advises that, while technology projects can be used to enhance community interaction and prosperity, they can also lead to division among community members. To be successful, the online community requires close links to the existing offline economic community, as well as strong leadership able to unite the community as a whole (Gurstein, 1999 cited in O'Neil, 2002).

## **2.3 Community Informatics**

The majority of advances in using technology to support community, as opposed to supporting business activities, have been made since the year 2000 (Parameswaran and Whinston, 2007). The term 'Community Informatics' was initially coined by Michael Gurstein, and despite widespread use in the literature there is no agreed definition of the term or the field it seeks to describe (Stoecker, 2005a). The field of Community Informatics (CI) has been recently established, with the first hard copy CI literature

published in 2000 (Stoecker, 2005a), the Community Informatics Research Network (CIRN) founded in 2003 (Community Informatics Research Network, 2006), and the Journal of Community Informatics launched in 2004 (Journal of Community Informatics, 2006). CI literature covers a range of topics, including social capital, the digital divide, virtual communities, and community technology centres. CI research may also be designed to improve the effectiveness of a community using technology. To date, no methodological approaches have been agreed upon by CI researchers (Stoecker, 2005a). This diversity has created challenges in determining the ‘core questions’ that the field seeks to address (Stoecker, 2005a). It has been suggested that this lack of direction is one of the reasons that CI is considered an underdeveloped field. For the purposes of this research, the field of Community Informatics includes all community-focused projects and research concerned with the role of technology in community experiences and development. Such projects and research do not necessarily have to result in direct benefits to the community, however, all projects should have the intention of implementing positive change.

Significant discussions between CI practitioners and researchers have occurred over the last few years, and workshops addressing these issues are ongoing (for example, the INESC Community Informatics Workshop in November 2007) (Stillman, 2007). These have concerned the terminology and boundaries of CI, and the balance between ‘doing’ and ‘researching’. A variety of terms have been discussed in an attempt to ‘better’ describe the field of CI, including ‘social appropriation of ICTs’ (Gurstein, 2006) and ‘social informatics’ (Eskow, 2006). Discussions also addressed the need to balance social and technical issues, describing CI as addressing ‘socio-technical’ issues (de Moor, 2006). Connotations related to these terms include political focus, issues of access, global commons, ‘sentimental’ baggage associated with the term ‘community’, implied links to ‘civil society’, forced physical (geographic) boundaries, concerns about culture, and translations of the terminology to various languages.

The two main elements in CI are information and communication technologies (ICTs), and ‘community’ (Day, 2002; O’Neil, 2002; Stoecker, 2005a). CI is a strategy or approach that seeks to use ICTs to serve communities (Stoecker, 2005a), links community development efforts (such as social and economic development) with the emerging opportunities presented by ICTs (Gurstein, 1999 cited in Romm and Taylor,

2001; O'Neil, 2002), and considers how ICTs are used by geographic communities (O'Neil, 2002). It is essential that ICT initiatives are based on the needs of the local community (Day, 2002). While this concept has existed for some time, it was the formation of CI as a field that brought together the diverse research and activities conducted with this aim. Two distinct areas of CI have been identified by authors seeking to define the field of community informatics: the practical application of ICTs to facilitate community processes and assist in the achievement of community objectives, and the scholarly research and practice of “systematically approaching Information Systems from a ‘community’ perspective” (Bieber et al., 2002 cited in Stoecker, 2005a). Many instances of CI projects seek to include elements of both practical community facilitation and scholarly research. However, no research to date has involved investigation of multiple community websites developed in such a way that their experiences can be compared and used to inform academic research.

The suggestion that CI can “contribute to empowered communities – communities that are politically, culturally, and economically strong enough to negotiate agreements with corporations and higher level governments that bring them more benefits than costs” (Stoecker, 2005a, 21) implies that all information technology projects implemented in a community will provide benefits to the community. CI experts have more recently recognised that the focus of any community enhancement effort should be on community development, with the skills and tools of CI practitioners applied only after it has been determined that technology is a necessary element of the solution. In community development, the entire community is involved “in creating a sustainable, self-sufficient, empowered community” (Stoecker, 2005a, 21).

While the focus on technology in CI solutions is a valid criticism, this research aims to critically analyse the viability of community websites created under a government-developed scheme. As a result, the role of technology was predetermined in the project. This study will record the experiences of the case studies, including non-technical aspects of the community experiences, and will assess the impact of the chosen technologies on the success of the community websites. As Stillman and Stoecker experienced in a previous Australian CI project, “information technology issues were [interwoven] with broader and more fundamental community development infrastructure issues” (Stoecker, 2005a, 16). The lessons established from this research

are likely to address both technology and community elements necessary for success under the CGDN model.

While CI projects have sought to combine practical community facilitation and scholarly research, to date there has been little comparative research across CI projects (Stoecker, 2005a). As a result, practitioners have struggled to link the experiences of practical projects with more generalisable academic outcomes. This research seeks to overcome this criticism of CI projects by conducting case studies on three communities, with the experiences in each community compared to determine whether identified factors are common to diverse communities.

### ***2.3.1 Measuring the Value of Community Informatics***

In the past, it has been difficult to objectively assess the benefits that ICTs have brought to communities because there has been little literature on this type of evaluation (O'Neil, 2002). This may be in part due to the subjective nature of many benefits that accrue to communities (O'Neil, 2002), such as increased communication and interaction between community members. However, O'Neil suggests that, as external funding agencies force organisations to become more accountable, this may change (O'Neil, 2002). To date, most community ICT project evaluations have been limited to qualitative data, often in the form of case studies. This type of evaluation is supported by many researchers (see Mueller, Neice, Oqasz in O'Neil, 2002), who focus on the need for 'real' evaluation through observation and anecdotal evidence of user behaviour.

## **2.4 Community Websites**

Community websites have increased in popularity as the Internet has become more widely accessible to populations (Clarke III and Flaherty, 2003), particularly in developed countries. Many geographic and interest communities have developed websites that allow members of that community to share information and interact using the Internet.

The following section will define the concept of a 'community website'. A range of past and current CI projects will be briefly discussed, with a focus on community websites

and general community-technology schemes. Examples from Australia, the United Kingdom, and United States of America will be presented.

#### ***2.4.1 Defining the Concept***

The concept of a ‘community website’, and the ‘online community’ that is created by a community website, are not easily definable and common definitions do not exist (Benassi et al., 2004). The term ‘community website’ typically refers to a website that is designed by, for, or to represent a group of individuals. The term ‘online community’ describes a group of individuals who interact online. Much of the difficulty defining community websites may be attributed to the lack of clear definition for ‘community’ (see Section 2.2).

Community websites are customarily categorised by their intended audience and content (Vrazalic and Hyland, 2004). Within community websites, two distinct groups have been recognised. These two groups relate closely to the two types of communities identified in Section 2.2: geographic communities and interest communities. No formally agreed names for these two types of community websites have been established. Terms commonly used in published research to refer to these types of websites (Norris, 2004; Vrazalic and Hyland, 2004) are used throughout this section when distinguishing between the two website types: Regional Community Portals (RCPs) and Common Interest Portals (CIPs). RCPs are “those that represent geographical communities” (Norris, 2004), and CIPs are websites “representing communities of shared interest” (Norris, 2004). RCPs may be developed to promote tourism, under government funding, or through community-based initiatives (Vrazalic et al., 2003).

When widespread use of the term ‘portal’ was first adopted in 1997, it described websites that acted as a gateway to the Internet by providing a search facility or multitude of links, through which the user could access their desired information on the Internet (Clarke III and Flaherty, 2003). ‘Portal’ implied that the website acted as an access point to other resources, rather than providing content and services, and that this website was configurable. However, over time the term ‘portal’ has been applied to a range of websites that do not meet the requirements described above (Clarke III and

Flaherty, 2003). As these websites evolved, they became “multifunctional spaces used for information, navigation, communication and e-commerce (Vermeij, 2000 cited in Vrazalic et al., 2003), offering broad content to the mass market. The term is now also used to describe websites with a “particular type of audience, type of information, or a variety of services” (Clarke III and Flaherty, 2003, 17). Damsgaard identifies characteristics of a typical ‘community’ of website users (Damsgaard, 2002 cited in Fisher and Craig, 2005). These characteristics, and the use of the term *community*, suggest that users of such a website share a common interest or locality. The elements of websites now described as ‘portals’, such as the provision of content and services, as well as links to existing resources, are often undertaken by general websites that do not call themselves ‘portals’.

The terms ‘community website’ and ‘community portal’ are often used interchangeably in the literature, with both describing a website that provides content, services and links to resources for a specified group of people with a shared locality or interest. Due to the lack of clear definition of the boundary between portals and websites, and the presence of many community websites that do not meet the characteristics typically associated with the term ‘portal’, this research will use the term ‘community website’.

#### **2.4.2 Background to Community Websites**

The concepts behind community websites that represent geographical communities were initially founded in community networks, designed to expand “existing social networks within a geographic community” (Kavanaugh, 1993 cited in O’Neil, 2002, 80). The desire to support the needs of a specific geographic community and develop solutions to its problems, originally based in socially-oriented domains, was facilitated by electronic communication and resources offered by community networks (Morino Institute, 1994 cited in O’Neil, 2002). In contrast to this community-oriented approach to meet the *needs* of geographic communities, common interest websites were developed by communities of interest to meet the *interests* of individuals (Fisher and Craig, 2004), with little concern for their geographic location.

There have been a number of schemes that have been established around the world to facilitate the creation of community websites. Traditionally these schemes have had

external funding mechanisms in place and they have achieved mixed results (Thompson, 2002, 140; Australian Government, 2003a; Australian Government, 2003b; Vrazalic and Hyland, 2005). Longer-term viability has posed a problem for many schemes, with few schemes surviving long-term after funding has ceased. This section will present some of the major schemes with a focus on schemes from Australia. Success or failure of these schemes will be highlighted along with the funding structure of each scheme.

Community networks, popular during the 1990s, were a precursor to community websites. To connect to a community network, a user was required to dial-in to a central computer. The user was then connected to links or menu options from which they could choose to locate information about the area or communicate with other members (Beamish, 1995). In a paper in 1995, Beamish defined community networks as “based in a physical place”, with all users living or working in a similar physical location. In contrast, she claimed that ‘online communities’ had no basis in the physical world. However, over recent years the need for dedicated community networks has declined as greater numbers of people have direct access to the Internet. The resources previously only available from a community network, in many cases, are now available through websites on the Internet. As a result, the ‘online communities’ found on the Internet are, in many cases, more accessible versions of community networks, and do have a basis in physical place.

### ***2.4.3 Previous Schemes and Models***

In Australia, most web-based community schemes, such as community websites, have received funding through government schemes (Australian Government, 2003a). One such scheme was Networking the Nation (NTN), which was designed to facilitate community ICT initiatives through the provision of financial resources for such projects. By June 2000, 110 websites had been developed under its funding, with 37% of these being community websites (Vrazalic and Hyland, 2005). However, the NTN scheme was not effective in establishing viable projects. In one state, 130 ICT projects were funded, with 42 of these failing to meet their stated goals in the specified timeframe, at a collective cost of AU\$24.6million (Australian Government, 2003b). These figures are typical of the Networking the Nation program results across all states.

In an internal Queensland state government report, it was noted that many of the groups that received Networking the Nation funding “lacked the skills and expertise to implement many of the programs properly” (Young, 2001). As a result of the high failure rate, the Australian Government determined that it was not viable to continue funding such projects. Based on the outcomes of the Networking the Nation initiative, it was determined that community information technology projects required greater planning and expert knowledge for success. The Australian Government’s decision to eliminate future funding schemes for similar initiatives is likely to have a large impact on information technology development in the not-for-profit, community sector, as Australian communities are forced to develop extensive financial resources prior to beginning website development.

Another scheme that was designed and financed by Australian government bodies was the establishment of physical centres in regional, rural and remote communities that provide technology, resources, Internet access, training and educational programs to communities (Community Technology Centres Association, 2007). Operating with a community-centred focus, their purpose was to increase access to ICTs for all members of the community. These centres were developed under various schemes, including the national ‘Community Technology Centre Network’ (CTCNet, 2007), the ‘Community Technology Centres Association’ in the state of New South Wales (Community Technology Centres Association, 2007), and the ‘Telecentre Network’ in the state of Western Australia (Western Australian Telecentre Network, 2003). Experiences from these physical centres are that marketing plans must be targeted at the individual community based on community characteristics (Donovan et al., 2002), and are not easily transferable between communities. Facilitators must have the skills to identify and develop appropriate marketing strategies, and design the centre and its projects to be culturally appropriate (Donovan et al., 2002) and maximise equity of access.

Many of the factors required for the successful implementation and management of a physical technology centre are likely to be applicable to community websites because both introduce a new community-centred technology and way of building social capital in the community (Donovan et al., 2002). These include ‘soft’ skills to engage the community, facilitate partnerships, respond to changing community needs, and project-management skills and basic IT skills to establish and maintain the Centre (Donovan et



al., 2002). Effective and open communication by the facilitator is necessary to build community trust and involvement.

Ballarat's Centre for Electronic Commerce and Communications (CECC) sought to overcome the "substantial, and therefore prohibitive" (Thompson, 2002, 145) costs of the establishment and maintenance of community websites under existing models by developing the MainStreet.au.com project, which received \$409,000 in funding under the Networking the Nation program from 1999 to 2001 (Thompson, 2003). The project aimed to develop a website "project platform ... that is scaleable, replicable, and flexible" (Thompson, 2002, 141). Used as a framework, small communities can purchase access to the MainStreet.au.com platform, and control their own content, functionality and branding. All websites developed on the platform are accessible through the Mainstreet.au.com website, with the overall purpose of promoting "the widespread adoption of electronic commerce" (Thompson, 2002, 141). Despite CECC's suggestion that the Mainstreet.au.com project sought to overcome the problems associated with expensive website development models, the cost estimate for a basic community website is in excess of \$20,000 (Thompson, 2004). CECC staff justified the cost by claiming that, through use of the website features, communities are able to raise enough money to pay for the website.

Standard tools available as part of the Mainstreet.au.com platform include event calendars, online registration, news-building tools, payment and product systems, online forums, and web-based publishing tools (Thompson, 2002). These tools are a combination of in-house tools integrated with externally sourced products. All available tools are designed to be usable by people with limited technical skills, encouraging community members to participate in content publishing on their local websites. While numerous successful community websites have been launched by small communities, CECC has found that "the valuation of electronic commerce benefits is often difficult" (Thompson, 2002, 140). Therefore, the success of the Mainstreet.au.com project, judged in terms of financial viability and electronic promotion, was dubious. By 2007, the Mainstreet.au.com project was no longer promoted on CECC's website (CeCC, 2007). CECC's offerings are now heavily commercialised.

Similar ICT initiatives have been implemented in the United States of America. One agency involved in funding community projects is the Nebraska Information Technology Commission. In April 2002, the Commission awarded grants totalling US\$191million to projects that used information technology to benefit communities or regions in Nebraska (Nebraska Information Technology Commission, 2002). The community electronic network GrantNet (in Minnesota, USA) identified that people who participated in community meetings and projects, and who therefore had significant amounts of social and political capital, were more likely to be aware of and active in the development of these community technologies (Sullivan et al., 2002).

The voluntary and community sector in England received £80million during 2002-04 to improve their infrastructure, with £10million dedicated to Information and Communication Technology (ICT) projects. A separate £125million fund was also established to support specific types of communities (London Advice Services Alliance, 2003). Some of these funds were dedicated to educating and supporting the community and voluntary sectors in the development and implementation of ICT strategies. Communities that received funds from the £125million initiative were required to show that the work was sustainable after the funding ceased in 2006 (London Advice Services Alliance, 2003). In August 2007, the outcomes from this project had not been publicly released.

The examples of community ICT initiatives presented above have highlighted the importance of accountability in the delivery of funding. Funding agencies have responded by implementing greater accountability when allocating funds (London Advice Services Alliance, 2003; GrantStation, 2004). However, community organisations are often resentful of the reporting requirements imposed on them by external funding. One of the benefits commonly presented by independent funding agencies is that reporting requirements are minimal compared to government funding schemes (GrantStation, 2004; Hawai'i Community Foundation, 2004). As well as funding causing problems, numerous other issues (detailed in Section 2.4.4) have been identified from reviewing experiences of communities undertaking ICT projects.

#### ***2.4.4 Issues affecting the Viability of Community Informatics Projects***

Case studies of community ICT projects have revealed that there are a range of issues that impact on the success, and therefore the sustainability, of community websites. Despite literature identifying the need for broad studies to understand the issues affecting the success and survival of online communities and their websites (Kim, 2000), there was still found to be “a lack of frameworks and models to explain how community ...[websites] are developed, used and sustained” in 2005 (Vrazalic and Hyland, 2005, 481). Before considering whether a community website is sustainable, the website must do two things: survive, and grow (Beamish, 1995). The issues described in the following section impact heavily on the survival and growth of community websites, therefore affecting sustainability. The term *viability* will be used throughout this research to encompass the issues of survival, growth and, ultimately, sustainability.

Various definitions of sustainability exist in the Community Informatics literature, with many referring to factors essential to success (Day, 2002; Ripamonti et al., 2005). These factors are typically developed from a social science, multidisciplinary perspective that considers social, institutional, technical and economic factors (Day, 2002; Ripamonti et al., 2005). The factors must work in balance and be considered jointly to determine whether a project is sustainable. When detailed lists of critical success factors are developed, it is common for some factors to be irrelevant or have limited importance for some projects (Ripamonti et al., 2005). The following discussion presents high-level issues that are likely to be useful for consideration as factors when assessing the viability (including survival, growth and sustainability) of community websites.

##### ***2.4.4.1 Aims***

The determination of specific and meaningful aims, related to the needs of the community and its citizens, is essential in the development of a community website and the establishment of a sense of community (Beamish, 1995; Mieszkowski, 2000; Day, 2002). Ideally, broad community involvement should be sought when developing the community website aims, however this is more accessible in smaller communities (Donovan et al., 2002). From the aims, two types of goals can be developed. Short-term

goals are used to establish the groundwork for website growth and viability. Long-term goals address community participation and broader community development (Beamish, 1995 cited in O'Neil, 2002).

Despite the importance of determining these aims, which are necessary to guide the development of a relevant community website, many such projects do not have specified aims or objectives (TeleCommunities Canada, 1994). Clear aims provide direction, focus and the ability to assess the success of the community website (TeleCommunities Canada, 1994; Vrazalic and Hyland, 2004; Parameswaran and Whinston, 2007), and this success is largely dependent on the stakeholders' opinions (Fisher and Craig, 2004). The aims of the community website should also be used to inform the selection of content and functions on the website, particularly when these content and functions must be prioritised due to limited funding (Ripamonti et al., 2005).

Many community website projects are partnerships (Butcher, 1993), which may cause difficulties agreeing on specific aims. This difficulty also arises when the public sector, private sector and non-profit sector are involved in joint ventures (Day, 2002). Traditionally, when aims have been identified in partnerships they have been stated in vague terms, so that all parties feel that the aims meet their individual motivations, however it is also sometimes necessary for the parties involved to make changes to their "existing social and cultural perspectives" (Day, 2002, 4). TeleCommunities Canada, an organisation that works to promote and support local community network initiatives, suggests that the most important aims for any community technology project are to ensure maximum discussion, access and participation by community members, and to develop a system that supports community development (TeleCommunities Canada, 1994).

#### *2.4.4.2 Planning*

Planning is essential for a successful community website, with Millen, Fontaine et al. claiming that the development path is one of the main factors that impact on the community website (Millen et al., 2002). The development of a business plan is often

recommended during the set up phase (Vrazalic and Hyland, 2004). The conflicting priorities of those involved in managing a community website, combined with low levels of resources, often lead to difficulty developing realistic plans for website development and implementation. Sharing information and ideas between those involved (Mieszkowski, 2000) can also be challenging. Due to these limitations, it is almost always necessary to prioritise website requirements, typically through a ‘needs assessment’ (Stoecker, 2005b). A needs assessment uses two main criteria to assess the identified requirements, along with any extra criteria developed by the managing community. The two main criteria are importance (i.e. How strongly do people feel about this requirement? How much impact will it have on the website?), and feasibility (i.e. How easy is it to implement?). Any potential controversy related to the requirement is also likely to be considered (Stoecker, 2005b). Such controversy may be caused by the decision to allow broad advertising on a ‘community’ website, or the inclusion of online polls on contentious topics. The rankings from the needs assessment are then typically used to develop a realistic plan that allows the community website to provide maximum impact in the shortest possible time, with resource-intensive and controversial requirements not addressed in the early stages.

#### *2.4.4.3 Facilitation and Management*

Previous community ICT projects have shown that organisational support, a high quality management team, and specifically an effective facilitator, are essential for success (Beamish, 1995; Mieszkowski, 2000; Millen et al., 2002; Muylle and Basu, 2004; Vrazalic and Hyland, 2004; Ripamonti et al., 2005). The term ‘facilitator’ may refer to an individual working at the grassroots levels, or an umbrella organisation with high-level powers to protect and support community organisations. TeleCommunities Canada is one such organisation (TeleCommunities Canada, 1994). They are responsible for supporting, assisting and coordinating community ICT projects. Other roles include helping obtain funding and sponsors, helping to develop policies, assisting groups in the start-up phase, conduct relevant research, and disseminating the results of their experiences (TeleCommunities Canada, 1994). Some similar activities are performed by grassroots, community-based facilitators.

Community-based facilitators work closely with community members, and require a variety of interpersonal and organisational skills. They need the ability to engage and work closely with the community, identifying community needs and responding to them appropriately (Donovan et al., 2002). The abilities to establish partnerships and maintain open communication are essential (Donovan et al., 2002), with community trust vital for success (Mieszkowski, 2000). One process for involving community members in the community website and related decision making is to use 'people-centred governance' (Donovan et al., 2002). Other essential skills for the community-based facilitators involved in the establishment and maintenance of community websites include project-management skills and basic IT skills (Donovan et al., 2002). When facilitators do not have the skills to manage the community website, they should have the ability to develop them and get support in their areas of weakness.

Maintaining a sufficient level of membership (to provide staffing) is often problematic for community websites, particularly when all are working in a voluntary capacity. High turnover of members is common (Tanner, 2005). It is typical for community websites to be initiated by a small group of committed individuals (Ripamonti et al., 2005). The community website's ability to survive the departure of the founding members is integral to its success (Beamish, 1995). If the community website is not self-sustaining in terms of new community members joining the management group, or if the management group cannot afford to pay staff, this is problematic and is likely to ultimately result in website failure (Ripamonti et al., 2005).

#### *2.4.4.4 Financial*

Guthrie and Dutton claim that, in contrast to the significant influences of social and political contexts and the community culture, the amount of financial resources available does not play a major role in determining the participation levels and interactions between community members (Guthrie and Dutton, 1992 cited in Borgida et al., 2002). This finding contradicts other research, which claims that financial issues affect many areas of website start-up and development (Beamish, 1995; Millen et al., 2002; Fisher and Craig, 2004; Muylle and Basu, 2004; Fisher and Craig, 2005;

Ripamonti et al., 2005), thereby impacting on the website's community engagement and success.

Fisher and Craig (2005) conducted a literature review on issues affecting website development, locating literature to support the idea that funding was problematic during initial development and establishment, for content and technical maintenance of the website, and when attempting to achieve critical mass for longer term financial viability. They define success as a community website "remaining a financially, viable online entity... and ultimately becoming self sustaining" (Fisher and Craig, 2005, 137). Of the three identified elements for sustainability in a traditional geographic community, one element is economic sustainability (Yiftachel and Hedgcock, 1993). The issue of finance was considered so integral to the success of community websites that the S3 Model was developed to identify the issues that impact on each of the three phases of community website development: set up, survival and self-sustainability. While including social, technical, administrative and policy dimensions, the focus of the S3 Model is funding (Vrazalic et al., 2003; Vrazalic and Hyland, 2004) (see Section 2.4.5 for a detailed discussion of the S3 Model).

The establishment of a community website in a commercial environment was found to require significant financial and technological resources, with the acquisition of funds for both initial development and ongoing support typically being problematic (Fisher and Craig, 2004). While it is possible to derive financial benefits from a community website, companies attempting to do so were forced to invest significantly in the early stages of development and implementation (Millen et al., 2002). This risk is reflected in the development of all community websites, including those built for financial gain and those built for community benefit. The source of the finances used to fund the community website typically impacts on the technological and policy choices made (Guthrie and Dutton, 1992). Without reliable sources of revenue, long-term planning cannot take place.

While 'economical and financial sustainability' is one of three sustainability issues for community websites identified by Ripamonti, De Cindio et al. (2005), there is limited literature addressing the issue (Norris, 2004; Ripamonti et al., 2005). With many community websites claiming non-profit status, management is often reluctant to force

community members to pay for services (Beamish, 1995), limiting the finances available to provide enhanced services and pay staff. This problem can often be overcome by establishing close links between the activities of the community website and established local economic activity (Romm and Taylor, 2001).

#### *2.4.4.5 Website Technology*

Fisher and Craig's (2005) literature review on issues affecting website development observed that agreeing on the development process and selection of technology were commonly problematic, and they state that "technical support for small businesses can present problems" (Fisher and Craig, 2004, 3). One of the two categories of resources essential to run a community website, as identified by Ripamonti, De Cindio et al, is appropriate technical infrastructure (2005). Although community websites often have similar goals, the technology selections made when designing the system have a strong influence on who is able to manage and use the website (Guthrie and Dutton, 1992). Believing that many groups do not consider the social implications of technology selection which "influence its use and impact" (Guthrie and Dutton, 1992, 574), Guthrie and Dutton identified five factors that strongly influence technology and related policy decisions. The 'technical history' of the technology staff is the basis for technology preferences, with 'economic factors' determining priority of the expenditure on the technology. Management and financing of the community website is controlled by the 'political culture', and the design may be affected by 'interest group politics'. The level of 'community involvement' impacts on the design and operation of the community website (Guthrie and Dutton, 1992).

#### *2.4.4.6 Website Design and Content*

While the purpose of each community website is to meet the needs of its specific audience, a range of features and content are common to the majority of community websites. Despite the common set of features and content across community websites, Fisher and Craig's (2005) literature review on issues affecting website development observed that agreeing on website design and functionality were commonly problematic. Whatever the selected content and features, it is essential that community



websites are easy to use (Parameswaran and Whinston, 2007), that information is easily accessible to users (Teo et al., 2003), and that the websites provide a set of relevant services (Damsgaard, 2002 cited in Fisher and Craig, 2005). Research into e-commerce websites determined that those websites that assist users by providing help facilities and site maps are more likely to succeed than websites that do not provide such facilities (Muyllé and Basu, 2004).

The idea that, over recent years, it has become “tricky to divide the ‘virtual’ from the ‘real’ in any simplistic way” (Wakeford, 2004, 130) has been reinforced by the growth of electronic interaction options, including email, bulletin boards, instant messaging and newsgroups (Kim, 2000; Vrazalic et al., 2003; Vrazalic and Hyland, 2004). These online interaction tools facilitate the linking of individuals, creating online community spaces and social networks where members can share and develop ideas and knowledge, give advice, and support each other in problem solving (Millen et al., 2002; O’Neil, 2002; Clarke III and Flaherty, 2003; Vrazalic and Hyland, 2004).

While a community website allows only online interaction between community members, the social dynamics of such a community are often similar to those of a traditional face-to-face community (Kim, 2000). Mieszkowski (2000) states that, under the correct circumstances, it is possible for an online community to become a traditional community. Community websites also provide an environment in which all members of a community can interact without the boundaries of time and distance (Kim, 2000), and meet people they would not interact with in their face-to-face interactions with the community. Often promoted as a communication tool, community websites must meet the needs of individual users by integrating varied tools if this goal is to be achieved (Mongoose Technology, 2001).

Community websites typically provide a standard range of content and services, such as current local news, events calendars and a search facility (Clarke III and Flaherty, 2003). Successful community websites have rich and highly dynamic content (Parameswaran and Whinston, 2007), which may be drawn from external sources. The selection or review of this content may be completed by community website members (Parameswaran and Whinston, 2007) or by a commercial entity. The nature of the information (commercial vs. non-commercial) and editorial content (local community

control vs. externally sourced content) impacts on the type, tone and quality of the website content (Guthrie and Dutton, 1992). Maintaining current data has been found to be a significant problem for community websites, with one study finding that contact information listed for 58% of businesses on reviewed community websites was incorrect (Fisher and Craig, 2004, 7). In some cases, community websites provide 'premium' content or services at a cost to the user. Typical 'premium' content and services include email accounts, and time-sensitive information such as stock quotes (Clarke III and Flaherty, 2003).

General discussions on web usability recommend that websites should be designed for the culture of the target user group (Heldal et al., 2004). It is generally believed that all elements of a website should be built for the specific audience, with users interpreting each element differently depending on their cultural, ethnic, racial and linguistic background (Heldal et al., 2004). The selection of content for a community website, and all elements of community website design, should be heavily influenced by the target user group. In communities with users from mixed cultural, ethnic, racial and linguistic backgrounds, it is likely to be more difficult to design a website that will meet the needs of all users. It is essential that the composition of the community is understood (Heldal et al., 2004), so that the community website is culturally appropriate for the local community (Donovan et al., 2002; O'Neil, 2002). Generally, it is more difficult to meet the varied and competing needs of larger communities, due to their heterogeneous nature (Donovan et al., 2002). Heldal et al conducted a study to measure the relationship between a website and the user. The study determined that "regardless of usability, the user's impression will differ according to his/her cultural background. The differences between the groups are probably related to their different cultural background factors." (Heldal et al., 2004, 125) It also found that "satisfaction from accomplishing a task may be universal, but other impressions and personal preferences can differ according to cultural background." (Heldal et al., 2004, 126)

#### *2.4.4.7 Community Awareness and Participation*

Maximising community involvement is important for a community website, with a lack of community participation being identified as the major reason for the failure of some community websites (Fisher and Craig, 2004). This implies that a critical mass of users

is essential for the viability of a community website. Without a community of users, a website cannot be considered a 'community' website (Schuler, 1996; Millen et al., 2002; Damsgaard, 2002 cited in Fisher and Craig, 2004; Fisher and Craig, 2005). A sense of belonging is essential before members will actively participate in a community website (Day, 2002). This is made more difficult by the transient nature of community website membership (Parameswaran and Whinston, 2007). On-going publicity to maintain community awareness is therefore essential (Fisher and Craig, 2004). Clarke III and Flaherty identify three major drivers of user acquisition and retention: customisation, flexibility and relevance (2003).

Fisher and Craig (2005) determined that community participation was key to collaboration between website managers and community members. Collaboration was found to be essential to build trust and support among community members participating in the community website, and community ownership of the website was important to its success (Fisher and Craig, 2005). Romm and Taylor (2001) identified full community ownership of such projects as one of two major factors that are positively associated with project success. Community members must be motivated to participate if full community ownership is to be achieved. Understanding "the unique motivations of subgroups within [each] community" (Romm and Taylor, 2001, 2870) will allow the second major factor that is positively associated with project success to be addressed.

While e-commerce websites typically measure success by the total website traffic, studies have found that this is not a critical success factor for community websites (Muylle and Basu, 2004). Rather, it is the presence of an active community, where members contribute to the community website, thereby creating a sense of community identity, that is essential (Schuler, 1996; Day, 2002; Wang and Fesenmaier, 2004). These contributions may be in various forms, such as asking questions, sharing ideas, discussing public issues, and providing information and expertise. Members who do not contribute to the community, often called 'lurkers', are common on all types of community websites (Schuler, 1996; Parameswaran and Whinston, 2007). Community websites should be designed to maximise participation from all areas of the community, and having a large membership base minimises the problems of having a large number

of lurkers and is beneficial in the longer term because it allows the community to evolve and prosper over time (Wang and Fesenmaier, 2004).

Membership of a community website is typically open to all members of the community (Day, 2002), even when a community website has a specified target audience. It has been suggested that, without clearly drawn boundaries, there is “no incentive to become a member and no ability to control access based on membership” (Mongoose Technology, 2001, 17). While usually inappropriate to forbid access to any member of the community, in some instances it has been deemed necessary to limit or remove access to members based on inappropriate activity within the community (for example, postings including illegal or inappropriate material) (Schuler, 1996). This is often made more difficult by the anonymity of members (Parameswaran and Whinston, 2007), with nicknames and a lack of personal relationship or reputation common. Research suggests that the ability to clearly identify members, and view their complete ‘picture’ of interaction, increases the potential for success (Mieszkowski, 2000; Mongoose Technology, 2001), and the ability to develop a positive reputation through the community website is seen as an advantage by community members (Mieszkowski, 2000; Millen et al., 2002). Community websites are also promoted as allowing community members to get to know each other, and building trust between them (Millen et al., 2002). Despite the need to censor website content for inappropriate content, websites that demonstrate true community representation should “recognise and celebrate diversity of opinion, beliefs, values and culture and avoid policies that promote intolerance and disrespect” (Day, 2002, 7).

#### *2.4.4.8 Community Context*

The primary goal of a community website with specified ‘real-world’ geographic boundaries is to build social capital. Social capital is the ‘glue that holds the community together’ (Preece, 2002). Social capital promotes collaboration and cooperation between the community members, and incorporates the norms, networks and trust that facilitate collective actions for shared benefits (Woolcock, 1998 cited in Putnam, 1993; Parameswaran and Whinston, 2007). The greater the social capital in a community, the easier it is for members of a community to work together and coexist harmoniously

(Putnam, 1993). Previous studies have used social capital, combined with a sense of community and individual empowerment, as a measure of a community website's success (O'Neil, 2002). Benefits resulting from social capital can accrue to both individuals and the group, and may be tangible or intangible, economic, psychological, emotional, or social (Parameswaran and Whinston, 2007). In traditional geographic communities, one of the three elements of sustainability is 'social sustainability' (Yiftachel and Hedgcock, 1993). A community with social sustainability demonstrates solidarity and a shared sense of place, and is concerned about the long-term survival of the community. Successful online communities are also focused on medium- to long-term survival (Ripamonti et al., 2005).

Unlike other types of websites, a sense of community in a geographic community website, and the related social capital, does not emerge as a by-product of the interactions between website users. Rather, a key component of any geographic community website is creating a sense of community, which will, in turn, lead to other community-based interactions and benefits (Loader et al., 2000). Therefore, the role of the geographic community website is more than simply providing an online space where members can communicate. Ultimately, the role of geographic community websites is to engage people at a deeper social level to build trust and loyalty among community members and a shared sense of ownership of the website.

While some researchers state that community ownership enhances the likelihood of success (Rosenbaum and Gregson, 1998 cited in O'Neil, 2002), it has been found that "most community networks run by non-profits are simply Web portals to other Web sites in the community and exhibit few characteristics associated with building social capital." (Tonn et al., 2001 cited in O'Neil, 2002, 84) This is one difficulty faced by groups operating non-profit community websites on a small budget.

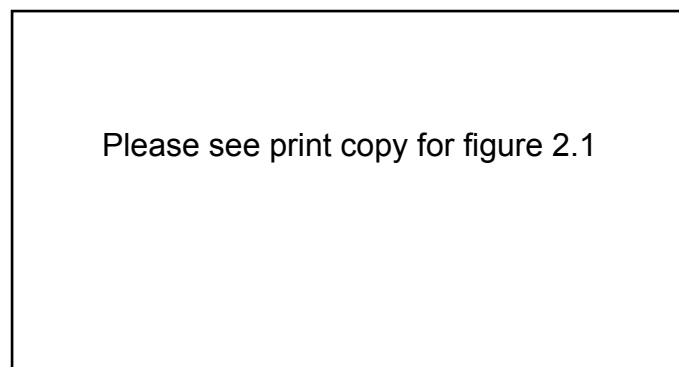
The political context of a community is also linked to social capital. Putnam found that communities with high levels of social capital also had "a respect for political equality" (Putnam, 1993 cited in Borgida et al., 2002, 126). A case study of four communities in California, USA (Guthrie and Dutton, 1992 cited in Borgida et al., 2002) found that the political climate had a significant influence on the success of the community ICT initiative. The ability for community members to democratically participate in the

development and content of a community website has been used as a category for measuring its impact (O'Neil, 2002). A community with high social capital is likely to have a more stable political context where community members display respect for differences. This allows community members to work together cohesively.

The social context in which an ICT project operates has been identified as a major factor in adoption of technology (Borgida et al., 2002), and in determining the participation levels and interactions between community members, in both American (Guthrie and Dutton, 1992) and Canadian (Virnoche, 1998 cited in Borgida et al., 2002) contexts. Social context includes elements such as public access to technology and restrictions on content and usage (Borgida et al., 2002). It is common for community organisations to experience difficulty becoming involved in online community interactions because of limited technical skills and a lack of resources. However, once these obstacles are overcome, involvement can lead to increased visibility within the community and a reduction in costs (Schuler, 1996). A community organisation's costs and challenges of moving online can be minimised by, at least initially, becoming involved in an existing online community website. This eliminates the need for set-up, and provides access to an established user base (Schuler, 1996). A social context which, for example, encourages widespread and equitable access to technology for members of the community is adding to their social capital. One attempt to build this access to technology within Australia was the establishment of Community Technology Centres (see Section 2.4.2). Communities in the studies that facilitated equitable access to resources developed a more inclusive environment with higher participation.

Community values and attitudes contribute significantly to the social content, and hence the level of social capital within a community. Even in communities with diverse cultures and social norms, the presence of solidarity and participation can be seen as shared community values (Day, 2002), with the establishment of links with existing community-based organisations, such as schools and local government, solidifying the website's position in the community (O'Neil, 2002). Communities with a sense of shared benefit and ownership (O'Neil, 2002), which are organised on the basis of cooperation for common good, demonstrate a higher level of social capital than those which were based on competition between community members (Borgida et al., 2002, 126).

Romm and Taylor developed the Autonomy/Harmony Model (2001) (see Figure 2.1) to describe the impact of the social context on, and predict the sustainability of, any Community Informatics (CI) project. The Model is depicted using a 2x2 matrix, with the two dimensions being *Autonomy* and *Harmony*. *Autonomy* refers to “the degree to which the CI project is resourced, managed, or both by the community in which it occurs” (Romm and Taylor, 2001, 2869), demonstrating the importance of community ownership. *Harmony* is “the degree to which the local community is conflict free, particularly in relation to the CI project” (Romm and Taylor, 2001, 2870), considering the history of the community, the compatibility of the culture with the project goals, and the support given by the community to the project. This model suggests that the greater the social harmony and support within the community, the greater the chance of the project succeeding and of long-term sustainability (Romm and Taylor, 2001).



*Figure 2.1: Romm and Taylor’s Autonomy/Harmony Model*

#### *2.4.4.9 Competition*

The existence of multiple online community resources can encourage providers to supply better resources to the community of users, and can decrease costs associated with accessing or participating in these online projects (Schuler, 1996). However, it is common for the content of community websites to overlap with other resources (Parameswaran and Whinston, 2007) and competing organisations are less likely to collaborate due to perceptions of the website as a competitive threat (Thompson, 2002), leading to duplication of effort. Such unproductive behaviour will often be manifested

through competition for funding, content and community support. This may lead to lesser quality information and resources, and may cause community users to become confused (Schuler, 1996). Individual providers of information and resources in a community may be unwilling to become closely linked to a central community website because it is difficult to provide a single interface for all resources while allowing individual providers to maintain their individual identities (Schuler, 1996). Negotiating the rights and responsibilities of each participant in a community website at an early stage is likely to minimise such problems. Ideally, a community website should provide economic development opportunities for the community it represents, to allow the website to provide positive input into the community (such as educational resources or increased tourism) (Day, 2002; O'Neil, 2002).

#### *2.4.4.10 Perceived Value*

The value offered to users of community websites has a significant impact on the success of a community website (Millen et al., 2002). The benefits offered by a community project may be gained by the individual user, the community, or the website management organisation (Millen et al., 2002). The benefits to individuals include the ability to develop a positive reputation through the website, a more thorough understanding of the activities of other community members, and an increased level of trust between community members (Millen et al., 2002). In the majority of cases, businesses and other existing community groups must perceive value in joining the community website before participating (Fisher and Craig, 2004). As Romm and Taylor (2001, 2870) observe, "If members of the community cannot see how the technologies can be of use to them, they are not likely to adopt them". In a study by Fisher and Craig (2004, 9), in the early stages "63% [of business owners] thought joining the [community website] would help their business grow and 71% thought it would raise the business profile." However, in this study these results were not achieved. A range of potential benefits are also available to the organisation that runs the community website. These benefits may be tangible financial benefits, or intangible gains such as increased community presence and higher visibility (Millen et al., 2002).



#### 2.4.5 *Modelling the Issues*

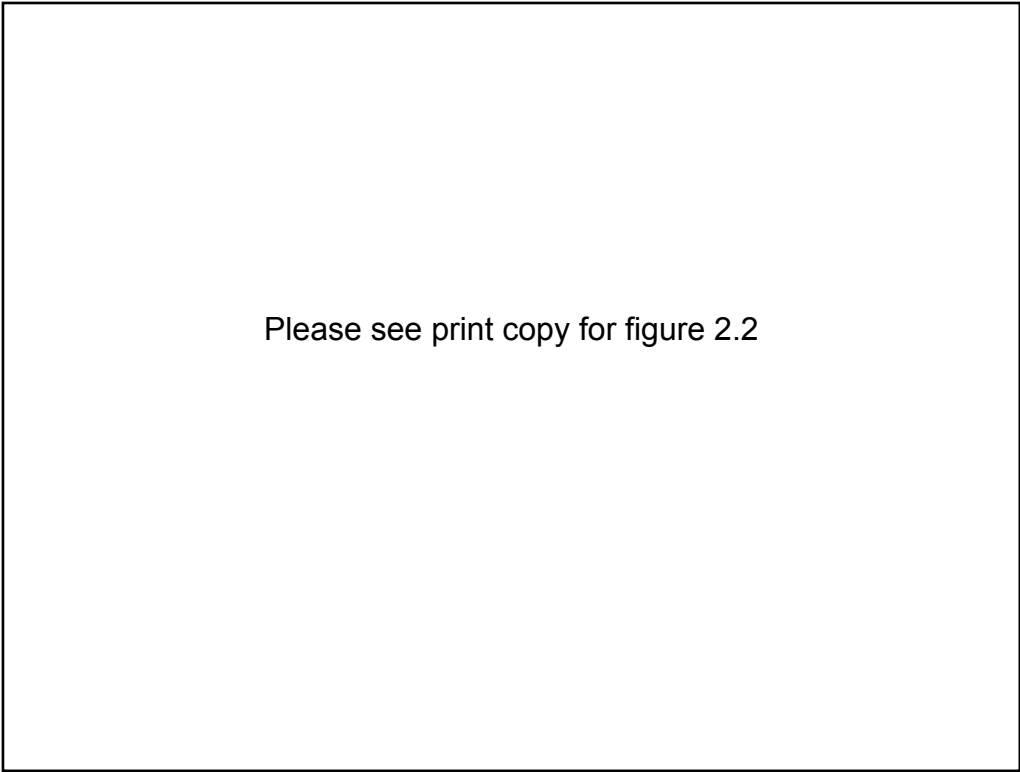
Research indicates that most sustainability models to date have been designed for commercial projects rather than community-based projects. Despite much discussion in CI literature about the importance of sustainability for CI projects, few models that address *community/social*, *finance* and *technology* issues have been developed. This section will present three models that seek to identify and describe sustainability issues for CI projects.

Based on Romm and Taylor's research (2001), factors influencing the success and sustainability of CI projects include resourcing, management, community ownership, lack of community conflict, community history, the compatibility of the culture with the project goals, and the support given by the community to the project. Each community's level of *Autonomy* and *Harmony* is assessed and marked on the *Autonomy/Harmony Model* 2x2 matrix (Romm and Taylor, 2000) (see Figure 2.1: Romm and Taylor's Autonomy/Harmony Model on page 40), with the combination of these two factors used to determine the project's likely sustainability. However, a study of the *Autonomy/Harmony Model* found that it ignored numerous factors that have the potential to influence the success and sustainability of CI projects (O'Neil, 2002). The ignored factors include "technological development, government, finances...motivation, politics [and] culture" (O'Neil, 2002, 78), and the *Autonomy/Harmony Model* does not consider that community harmony and autonomy will change over time (O'Neil, 2002).

While interested in building a CI sustainability model, Ripamonti, De Cindio et al. stated that this "is a long and complex process" (2005, 65). Therefore, they limited their model to two issues: "how to define the cost structure of online communities and how to measure their benefits" (Ripamonti et al., 2005, 65). While recognising the importance of social and technology factors, these are not included in the model because the researchers believe each CI project must identify their own social and technology success factors. The model, based on concepts found in business literature, focuses on financial sustainability.

The S3 Model (Figure 2.2) was designed specifically for one type of CI project: community websites. It is the most comprehensive model for describing relevant

sustainability issues. The S3 Model of regional community websites was developed by Vrazalic and Hyland (2004) to identify dimensions that impact on the sustainability of regional community websites at each of the three stages of development: Set-Up, Survival, and Self-Sustainability. While based on the concept of funding, it describes the social, technical, administrative and policy issues that communities must consider in the on-going development of their websites. The S3 Model is useful because it helps to identify a range of factors that must be considered in the development of a community website, and provides a list of issues that potentially contribute to the sustainability of the website. Limitations of the S3 Model include assumptions that a community website has funds available in the first stage, and that they are part of a top-down government driven program (Vrazalic and Hyland, 2004). The S3 Model also does not identify the interdependencies of the identified dimensions, and it has not been validated.



Please see print copy for figure 2.2

*Figure 2.2: S3 Model (Vrazalic et al., 2003)*

The success and subsequent sustainability of CI projects, and community websites in particular, is influenced by many diverse *community/social, finance and technology* issues. With no CI model that addresses all these aspects, there is an opportunity for this research to fill this gap in the literature and identify the interdependencies of the identified issues.

#### ***2.4.6 The Process of Developing a Community Website***

As explained in Section 2.4.1, the terms ‘portal’ and ‘website’ are often used interchangeably in the community website literature. A systematic and thorough approach to website development was mapped by Clarke III and Flaherty (2003). It identifies the ‘Five D’s of portal strategy’: define, design, develop, deliver and defend. While the paper is targeted at business-to-business websites, the five D’s can be applied to the development of all websites by replacing business terms such as ‘managers’ with ‘stakeholders’. Clarke III and Flaherty’s mapping of the website development processes reinforces the importance of numerous issues previously identified. These issues are presented in italics in Table 2.1 below, which is an adapted version of the Five D’s of portal strategy (Clarke III and Flaherty, 2003).

Table 2.1: Adapted version of the Five D's of portal strategy

Define	<ul style="list-style-type: none"> <li>• Measurable <i>aims</i></li> <li>• Processes to encourage <i>community involvement</i></li> <li>• Who will be involved in the project, the responsibilities of each person, and the <i>interrelationships</i></li> <li>• The size and <i>scope of the website</i> (audience, content, services)</li> </ul>
Design	<ul style="list-style-type: none"> <li>• Systems and <i>applications</i> that will be used in the website</li> <li>• <i>Information content</i></li> <li>• Aesthetic <i>appearance</i> and <i>navigation</i> of the website</li> </ul>
Develop	<ul style="list-style-type: none"> <li>• A pilot website to test with users (<i>feedback</i> must be collected and applied where possible)</li> <li>• <i>Interest</i> in the website</li> </ul>
Deliver	<ul style="list-style-type: none"> <li>• The <i>website</i> to the users (consider the domain name, <i>publicity</i>)</li> </ul>
Defend	<ul style="list-style-type: none"> <li>• The website's position in the market (<i>financially sustainable</i>)</li> <li>• The website's position in the minds of users (encourage ongoing feedback, <i>promotions</i>)</li> <li>• The website from harm using <i>technology</i> measures</li> </ul>

#### 2.4.7 Conclusion

This section has identified the issues that impact on the success of community websites, as determined by previous studies. Ten groups of issues were discussed: determining the *aims* of the website, the importance of *planning*, the role of the *facilitator*, *financial* concerns, *technology* issues, website *design and content*, the importance of *community awareness and participation*, the importance of the *community context*, possible impacts of *competition*, and the need for community members to *perceive value* in the website.

Five repeated themes can be identified in the literature. A community website must *appear valuable to the community*, in order to engage community members, develop an active membership base, build social capital and be operated with a community-focus. High *awareness* of the website must therefore be developed, with promotion continuing after launch to maintain a strong *membership base* and increase the *financial viability* of the website. To lead the community website development an effective *management team* is required, including a skilful *facilitator* and interested community members. This

management team should be able to build relationships with the wider community, to inform the *website* development process. These themes will be considered in **Chapter 8**, to compare findings in the literature with the findings of this research.

This research examines the implementation of a new Australian scheme, the *Community Geographic Domain Name (CGDN) Scheme*, under which Australian geographic communities can build community websites, and determine whether the issues experienced in previous studies are also likely to be experienced in the CGDN Scheme.

## **2.5 Conclusion**

This chapter has reviewed the literature relevant to this thesis by first introducing the field of Community Informatics (CI), within which this research is situated. Based on the review conducted above, several important observations about the research area can be made. The review of community websites and similar CI projects identified key issues that impact the viability of these projects, including the definition of project aims, planning, project management, finances, technology, website design and content, community awareness and participation, the community context, competition with other projects, and the perceived value of the project. Of the previous research conducted in the domain, none has directly compared the experiences of multiple communities developing community websites under the same scheme.

This study will evaluate the Community Geographic Domain Name (CGDN) Scheme, as an instance of government-initiated, structured community website schemes. The three communities trialling the CGDN Scheme will also be evaluated. These evaluations will be conducted to assess the Scheme and its governing CGDN Policy, thereby addressing the following research goals.

- To monitor the development of the national CGDN Scheme and Policy in Australia
- To evaluate the viability of the CGDN Scheme as an instantiation of government-initiated, structured community website schemes.

To date, no research has been able to determine the role of specific issues in the development of comparable community websites. While each community is unique,

communities developing a community website under the CGDN Scheme have similar experiences, making them comparable. Through the observation of three test cases operated under the CGDN Scheme, this research will identify the issues faced by community groups attempting to build websites under a government-initiated, structured community website scheme, and the relationships between these issues. The observations of the three case studies will address the following research goals.

- To develop a deeper understanding of issues faced by groups developing community websites.
- To compare and contrast various approaches to developing community websites within a government-initiated scheme, as observed through the CGDN Projects.
- To understand how the design of government-initiated schemes affects community website project outcomes.

The existence of these three test cases strongly suggests that the research goals listed above could be achieved, in part at least, through a case study approach. **Chapter 3** will explain the methods to be used in the three case studies, with the case studies described in detail in **Chapters 5-7**. The issues identified in the evaluation of the CGDN Scheme and the three case studies, and their interdependencies, will be described in **Chapters 4-7**. **Chapter 8** will present these issues, their interdependencies and the lessons learned from this research.

## Chapter 3: Research Methodology

### 3.1 Introduction

A review of the relevant literature in the previous chapter highlighted a gap in Community Informatics (CI) research. To date, no studies have compared the experiences of multiple community websites to identify factors that affect the viability of these websites. This gap in the literature was made more apparent with the implementation of the Community Geographic Domain Name (CGDN) Scheme, with participating communities having few previous studies to consider. To assist future communities to develop viable community-based and community-driven websites, an analysis of the CGDN Scheme will be completed. The aim of this chapter is to describe the research methodology that will be used to *record* the experiences of the CGDN Project (or ‘test case’), *identify* the issues faced by community websites, *critically evaluate* the CGDN Scheme and the CGDN Projects, *assess* the viability of the CGDN Scheme and *build* models of issues that affect the success and long-term viability of CGDN websites. The area of Community Informatics is in its infancy (see Section 2.3), and therefore has not yet developed a large body of research, such as validated theories, models, frameworks or standard methods, on which such research can be based (de Moor, 2007). A study of CI conference proceedings has revealed that many research publications do not provide details of the research methods used (Mitrovic and Bytheway, 2006), hence it is difficult to identify shared research methods within the field. The majority of CI researchers and practitioners believe that this lack of theoretical foundation for the academic discipline “leaves a wide space for different opinions regarding its theoretical and methodological issues” (Mitrovic and Bytheway, 2006, 233).

Although there is debate on the usefulness of Information Systems methods for Community Informatics research (de Moor, 2007), Information Systems research still offers the best methods at this time and these methods are therefore used in the current research. To complement the selected Information Systems methods, grounded theory methods are also used to ensure that theory and practice are linked which is a significant concern in CI (Mitrovic and Bytheway, 2006), thereby increasing the relevance and usefulness of this findings in the research (Gurstein, 2006 in Mitrovic and Bytheway,

2006). Grounded theory allows the research to explore the interwoven nature of practice and theory, and contribute to positive outcomes in both areas.

This chapter begins by explicating the research goals and outcomes of the present study. This is followed by a discussion of the difficulties associated with selecting a research framework for research in the Community Informatics field, and an explanation of the structured methodology developed for this research. The qualitative research methods appropriate for this study are then presented. The research methodology will be described in three sections: evaluation of the CGDN Scheme, evaluation of three CGDN Projects, and development of models.

## **3.2 Research Goals**

As stated in Section 1.3, this research aims to develop a deeper understanding of the issues associated with government-initiated, structured<sup>2</sup> community website schemes. In particular, this research will use the CGDN Scheme, which is an instance of such schemes, to further develop this understanding.

This research is not concerned with assessing whether or not community websites in general are beneficial, nor is it concerned with identifying the specific benefits (if any) of a community website. Rather, this research aims to improve our understanding of the issues affecting the viability of community websites developed under a government-initiated, structured community website scheme.

The goals of this research study are:

- (i) To monitor the development of the national CGDN Scheme and Policy in Australia
- (ii) To compare and contrast various approaches to developing community websites within a government-initiated scheme, as observed through the CGDN Projects
- (iii) To evaluate the viability of the CGDN Scheme as an instantiation of government-initiated, structured community website schemes

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<sup>2</sup> While community website schemes have been previously implemented (see Section 2.4.3), they have commonly been limited to financial support and few have exhibited formal structures governing the actions of communities involved in the scheme.



- (iv) To develop a deeper understanding of issues faced by groups developing community websites
- (v) To understand how the design of government-initiated schemes affects community website project outcomes

The following section will explain how the research goals will be addressed.

### **3.3 Addressing the Research Goals**

Many research frameworks were considered when formalising the methodology for this research, for example March and Smith (1995) and Hevner (2004). However, these frameworks have been designed for information systems research. As previously explained, this thesis is situated in the emerging field of Community Informatics (CI), with community information systems considered to be “a special class of information systems” (de Moor, 2007, p.2). To date, no methodological approaches or tools have been agreed upon by CI researchers (Stoecker, 2005a; Stillman, 2006; de Moor, 2007). This issue is a current topic of concern within the field, with experts claiming that existing information systems research theory is “too generic” (de Moor, 2007, p.2) to be effectively applied to CI research.

Through the selection of appropriate academic research methods for achieving each research goal, and thereby achieving the overall research aims, it is possible to develop a highly structured research methodology. Using multiple methods enables the collection of data from multiple sources, ultimately providing a more thorough understanding of the situation which is ideal for CI research. A multi-methodological approach provides researchers with a set of complementary methods, with the view to maximising the strengths of each one (Fitzgerald and Howcroft, 1998).

This research seeks to contribute to a deeper understanding of the issues associated with government-initiated, structured community website schemes using the CGDN Scheme as one instance of such schemes. It should be noted that each of the research goals is not independent, and that the research goals were not achieved in strictly linear order during this research. For example, the assessment of the CGDN Scheme’s viability as an instantiation of government-initiated, structured community website schemes (*research*

*goal iii*) was partly informed by the consideration of various approaches to developing community websites through the CGDN Projects (*research goal ii*) and the understanding of issues faced by groups developing community websites (*research goal iv*). The CGDN Projects are communities building websites under the CGDN Scheme. Through the application of grounded theory, issues were categorised and models developed, informed by *research goals i, ii, iii and iv*. *Research goal v* is addressed throughout this research, and summarised in the lessons presented in **Chapter 8**. A range of qualitative methods were used to record and assess the experiences the CGDN Scheme (see Section 3.6) and the three CGDN Projects (see Section 3.7). Due to the absence of published metrics for the evaluation of such schemes, the evaluation of the CGDN Scheme (and its associated CGDN Projects) will be based largely on the perceptions of individuals involved in the trial of the CGDN Scheme, in conjunction with a consideration of the CGDN Scheme's ability to allow communities to build the community websites for which the CGDN Scheme was developed.

### **3.4 Overview of Qualitative Research**

Emerging over the last 40 years (Creswell, 2003), qualitative research aims to capture a holistic view of the context or social phenomena being studied, including its rules and structures. Rather than focusing on minute details or measurable elements of a situation, its purpose is to present a broad overview (Miles and Huberman, 1994; Creswell, 2003) that describes the 'full picture'. To allow the necessary information to be collected in sufficient detail, qualitative research is typically conducted over an extended period of time (Miles and Huberman, 1994; Creswell, 2003). This research involved the evaluation of three communities over a three-year period, with each attempting to establish a viable community website in that time.

There are many features that are common across most qualitative research. Maintaining the original form of all material collected is essential. Themes or concepts may be identified from the data collected, and these can be reviewed with participants (Miles and Huberman, 1994). These themes and concepts, and interpretations of the data, are determined by the researcher. The most appropriate interpretations may be identified by considering theoretical background and/or internal consistency. It is essential to recognise the role of the researcher's 'personal lens' when interpreting qualitative data,

and acknowledge relevant biases (Miles and Huberman, 1994; Creswell, 2003). Qualitative data is usually organised, contrasted, compared, and analysed using repeated words and themes identified by the researcher, requiring complex reasoning. It is necessary for the data collection and analysis processes to be iterative, which may lead to reformulation of the problem (Miles and Huberman, 1994; Creswell, 2003). In the early stages of any qualitative study, there is little standardised instrumentation used. The researcher is responsible for responding to data gathered, and modify data collection as a result (Miles and Huberman, 1994; Creswell, 2003).

Real-world practice-oriented research, supported by the collection of multiple participant meanings, is needed for the development of models. This type of research identifies the consequences of actions that the communities engage in and seeks to understand the longer-term implications of these consequences (Creswell, 2003). This process can lead to the generation of theory (such as informing CGDN Policy change), study the context of participants, and make interpretations of the data (Creswell, 2003).

Using a pragmatic theoretical perspective, which is based on the idea that “research always occurs in social, historical, political, and other contexts” (Creswell, 2003, 12), the social, political and historical contexts could be understood and considered when generating theories about the community experiences. Pragmatic theoretical research is concerned with ‘what works’, and finding solutions to problems (Patton, 1990). With a focus on the ‘problem’, this permits the researcher to select any appropriate method to understand the problem (Creswell, 2003). A range of data analysis techniques are described in this chapter, with a detailed description of the process used to analyse the range of data collected during this research.

### ***3.4.1 Multi-methodological Research***

It is possible to clarify and explain the ways a person in a specific situation understands, makes decisions about, and manages their day-to-day life, using a multi-method approach. A multi-methodological approach is one which employs a variety of methods in a single study. One significant advantage of using a multi-methodological approach is the opportunity to minimise the limitations of each method, with researchers suggesting that “biases inherent in any single method could neutralize or cancel the biases of other

methods” (Creswell, 2003, 15). Often, multiple methods are used to address the numerous goals of the research. These methods are interactive, allowing the participants to directly supply their views (Miles and Huberman, 1994; Berkowitz, 1997; Creswell, 2003). The approach of triangulating from multiple sources (explained in detail below), which allows data to be combined, compared and verified, was determined to be the most effective method for evaluating community projects involving information technology, such as this one (O'Neil, 2002; Myers, 2005).

This research uses a multi-methodological approach to allow the capture of data from a variety of sources. This multi-methodological approach is supported by extensive research, with the most effective method for evaluation of community informatics research found to be “triangulation from multiple sources of data to verify findings and to get the most complete picture possible” (O'Neil, 2002, 94). Research has also found that results from one method can be used to inform the application or results of another method (Creswell, 2003). Through the use of a range of methods, this research collected material from a range of sources, which is essential when studying such a rich field of data. (For example, it is necessary to evaluate documentary data using a different method than would be used to obtain the opinions of individuals involved in the process.)

### ***3.4.2 Qualitative Research Methods***

Qualitative methods were “developed in the social sciences to enable researchers to study social and cultural phenomena” (Myers, 2005), and allow the researcher to use a variety of data sources. The advantage of qualitative research methods, as opposed to quantitative methods, is that they allow the individuals and situation to be understood within their social and institutional contexts (Kaplan and Maxwell, 1994 cited in Myers, 2005).

It is recommended that a variety of methods are utilised in Community Informatics research “to capture the richness of these projects” (O'Neil, 2002, 91). Qualitative methods include open-ended questioning, interviews, surveys, observation, focus groups, electronic discussions, ethnographic fieldwork, case study, stakeholder analysis, site visits, participant observation, pre/post testing, content analysis and documentary

analysis (O'Neil, 2002; Creswell, 2003; Myers, 2005). Documents can include published and unpublished documents, archival data, audiovisual data, images, company reports, private communications, and newspaper articles (Creswell, 2003; Myers, 2005). Many of the methods listed above are used to develop an understanding of the 'inside' perceptions of the individuals involved, and can only be captured through attentiveness to the individuals' speech and behaviour, empathetic understanding, and an ability for the researcher to suspend preconceptions while interacting with the individuals (Miles and Huberman, 1994).

It is common to distinguish between primary and secondary data sources in qualitative research. Primary sources are those gathered from the individual or organisation directly, and these are typically unpublished (Creswell, 2003). Secondary sources are previously published materials (Creswell, 2003). This research relies heavily on primary sources to collect 'real life' data about the experiences of the communities, with a limited number of secondary sources used.

The following section will describe the selection of a suitable research approach and techniques that are consistent with the research goals and the conduct of qualitative research.

### **3.5 Shared Evaluation Approach and Techniques**

The evaluations of the CGDN Scheme and three CGDN Projects are closely linked, with the evaluations of the CGDN Projects used to inform the evaluation of the CGDN Scheme. The relationship between the CGDN Scheme and CGDN Projects – with each CGDN Project being an implementation of the CGDN Scheme – allows the evaluations of the CGDN Scheme and CGDN Projects to be conducted as a set of interrelated case studies. While the CGDN Scheme and CGDN Projects each have their own set of data, most of the data collected is pertinent to both evaluations. Due to the significant overlap in the data collection and analysis, these details are presented in Section 3.5.2. The following section explains the case study approach used in the evaluation of both the CGDN Scheme and CGDN Projects.

### **3.5.1 Case Study Approach**

Case study research is the most commonly used qualitative research method within the information systems discipline (Myers, 2005). The term *case study* may be used to describe the case under investigation and to describe a research approach (May, 2001; Myers, 2005). This research will use the term *case study approach* to denote the research approach, and *test case* (referring to the CGDN Scheme or CGDN Projects) to denote each case under investigation. This research conducted “direct interpretation of the individual instance[s]” (Stake, 1995, 74) of CGDN Projects, and evaluated the CGDN Scheme “through aggregation of instances” (Stake, 1995, 74).

A case study approach involves detailed research to describe and understand an event, an activity, a process, a program, an individual or a group of individuals (the test cases) (Stake, 1995; Creswell, 2003; Myers, 2005) using “a variety of data collection procedures over a sustained period of time” (Stake, 1995 cited in Creswell, 2003, 15). Case study research requires that the researcher become familiar with the participants and the environment in which they operate, before analysing “the data for themes or issues” (Creswell 2003, 191). Each test case must have clear time and activity boundaries (Holloway, 1997; Creswell, 2003), however it is often difficult to define the boundaries between the test case and its context (Yin, 2003 cited in Myers, 2005). Using a case study approach allowed the issues that impacted on the viability of the CGDN Scheme and CGDN Projects to be identified within their real-life context, without having to pre-define the boundaries of the research (Yin, 2003).

The study employed multiple sources of data, including material used by each of the three communities participating in the CGDN Project, material collected by the CGDN coordinator, and material collected by the researcher from CGDN communities and the coordinators to document their experiences. The material collected by the researcher allowed the real-world experiences of members of each test case to be documented, and provided the ability to identify the consequences of actions by auDA and the test case participants (Creswell, 2003).

As stated above, a case study approach was used to record the CGDN Scheme (see Section 3.6), and evaluate its appropriateness. A case study approach was used also to

capture the experiences of the three CGDN Projects (see Section 3.7). Test case selection (May, 2001) was influenced by a variety of factors: availability, the need for consistency, across test cases, and the idea that each was ‘typical’ of a chosen population (e.g. large country town) while exhibiting distinct differences from the other test cases.

The three CGDN Projects were chosen as test cases for this research because:

- They are all community websites.
- They all began the Set-Up phase in early 2004, allowing the entire process to be documented.
- They were all required to complete a high level of reporting because they were One City One Site (OCOS) test cases. The procedures and reporting requirements were defined by staff from the New South Wales Office of Information and Communications Technology (OICT) working on the OCOS project.
- They were required to be developed by the community for that community.
- They were all supposed to be run by newly-formed community organisations. As a result, the history and financial situation of the organisation itself will have minimal impact on the viability of the website.

Three CGDN Project test cases were used in this research because three communities were involved in the trial of the CGDN Scheme. While results from a single test case cannot necessarily be generalized, observing three test cases significantly reduced the issues associated with generalising results, allowing common experiences to be identified while providing the opportunity to note issues relevant to only specific communities. CI literature also supports the value of comparative research (Stoecker, 2005a). Despite claims that research of a single or small number of test cases produces research that is not generalisable and therefore has little value, Sayer (1992 cited in Stoecker, 2005b) claims that ‘intensive research’ (with a detailed focus on a small number of cases) has a distinct value. ‘Extensive research’ (with a general study of many cases) is effectively used to identify trends and characteristics of groups within a specified population. However, it is not possible to study a large number of cases in detail because only three communities participated in the CGDN Scheme trial.

Extensive research would have also resulted in a general overview of each test case, rather than a deep understanding of the experiences of each. ‘Intensive research’ is valuable for studying cause and effect in cases, and a detailed investigation can be successfully carried out due to the small number of cases. The ‘real’ experiences of cases can be recorded in ‘intensive research’.

Qualitative research was used to analyse variation *between* these test cases. Within each test case, the number of participants is relatively small (less than 5 people in one case study), and each participant is likely to have a different perspective on the CGDN Scheme and their own CGDN Project. Due to the small number of sources from which to collect and compare data, it was not possible to derive statistically meaningful conclusions from the results, and was therefore not appropriate to conduct quantitative analysis as part of this research. The three test cases included varying community sizes, motivations and support mechanisms. Comparisons can be drawn between the test cases because their original mandate was identical, and their reporting in the early stages was highly structured.

While previous research in the Community Informatics (CI) field has used the case study approach to conduct research into the development and success of community websites, this is the first research to compare multiple communities as each attempts to develop a community website under consistent guidelines. A comparison of the experiences of multiple test cases will add confidence to the findings of this research, and may help to explain why different communities have varied levels of success with their websites (Yin, 1991 cited in Miles and Huberman, 1994). This process of observing multiple cases to confirm and explain results is often referred to as replication (Miles and Huberman, 1994).

### **3.5.2 *Grounded Theory Methods***

A grounded theory approach was used throughout the data collection and analysis in this research. The use of grounded theory allowed the researcher to organise, classify and model the data “based upon the researchers’ interpretation and description of phenomena based on the [community participants’] subjective descriptions and interpretations of their experiences” (Akhavan et al., 2006, 99) and the other rich data



collected from and about the test cases. This type of approach means that all representations of the experiences, and the theories relating to such schemes, are based on information provided by individuals participating in the experience (Creswell, 2003). The value of this approach has been recognised by CI researchers, due to grounded theory's ability to assist in "generating theories from a "clean sheet", [which is] necessary if community informatics is to become a recognised scientific discipline" (Mitrovic and Bytheway, 2006, 237). Researchers in the field of CI focus on the need for 'real' data and evaluation through observation and anecdotal evidence of user behaviour (see Mueller, Neice, Oqasz in O'Neil, 2002); the application of grounded theory methods to case study research allows this 'real' data collection and analysis to be achieved.

Strauss and Corbin (1998) suggest that Charmaz's list of criteria for evaluating grounded theory is broadly comprehensive. Charmaz identifies four categories of criteria upon which to evaluate both the scientific and creative facets of conducting grounded theory: credibility, originality, resonance and usefulness. In a practical sense, Strauss and Corbin believe that the ability to capture a broad range of the researcher's observations in the categories chosen, the ability to offer new insights, and the interpretation of analysis in a way that can be used in 'everyday worlds' are indications of high quality grounded theory research. This research will produce lessons that can be applied to real community projects attempting to implement technology solutions, thereby meeting Strauss and Corbin's (1998) requirement for high quality research using grounded theory.

#### *3.5.2.1 Grounded Theory Use in Information Systems & Community Informatics*

Grounded theory methods are grounded in the social sciences (Lehmann and Fernandez, 2007), but have been used in various fields of research including information systems. Research in CI often overlaps issues related to both information systems and social sciences. The most prominent application of grounded theory methods in information systems research is that of Urquhart and Fernandez (2006). This research was significant because it successfully implemented a recently developed research model

(referred to as *grounded theory building research*), demonstrating rigour and relevance which widely satisfied the expectations of other information systems researchers.

Prior to the development and acceptance of *grounded theory building research*, Robey and Markus' (1998) three research models for achieving rigour and relevance in information systems research were widely used. These research models were developed in response to pressures experienced by information systems researchers when striving to conduct research that is both academically rigorous and relevant to practice (Robey and Markus, 1998) – an experience similar to those currently being discussed by CI researchers. The relationship between information systems research and social science research practices was also noted by Robey and Markus when developing these three research models. *Applied theory* takes real problems that are relevant to current work in practice, and considers them in relation to established theory. *Evaluation research* strives to achieve a balance between theory and practice, by evaluating an intervention (i.e. a project, program, regimen or plan) based on specified objectives and outcomes. These outcomes may be derived from practical and theoretical data. *Policy research* focuses on a broad problem area that requires a solution, with the objective of understanding the policymaking process. Alternative solutions are identified and evaluated based on a set of criteria.

Further development on research models for achieving rigour and relevance in information systems research led to Fernandez and Lehmann's (2005) proposal of *grounded theory building research*. This alternative has been found to be particularly appropriate when addressing 'socio-technical phenomenon' (Mitrovic and Bytheway, 2006) and it is therefore relevant to CI research. While Robey and Markus' (1998) three research models for achieving rigour and relevance in information systems research are widely accepted, they required preconceptions about the instances or situations under evaluation. Such preconceptions have the potential to reduce the relevance of academic research to practitioners, as argued by participants in a discussion of CI methodologies (Mitrovic and Bytheway, 2006). The selection of grounded theory methods for this research minimises the preconceptions necessary when evaluating data, and thereby assists in the establishment of results that are relevant to practitioners as well as informing academic discourse.

As previously noted, there is limited published research in the field of CI which clearly specifies the methodology used for data collection and analysis. One such publication is the Doctoral thesis of Larry Stillman (Stillman, 2006). This thesis used a methodological approach for data analysis which is similar to the approach used in this research.

### 3.5.2.2 *Case Study Research and Grounded Theory*

Appropriate forms of implementation of grounded theory, first widely published in 1967 by Glaser and Strauss, have been widely discussed in academic literature, including in numerous publications by Glaser and Strauss (in many cases, separately). While commonly agreed that grounded theory methods study “actors in their context” (Lehmann and Fernandez, 2007), the process for this study is not highly formalised. Glaser considers grounded theory to be a ‘general method’ (Lehmann and Fernandez, 2007) and does not prescribe the types of data relevant to this method; possible data types include traditional observation and interview data, images, non-verbal material, and technical detail. Together, these data elements form a *text*. This text forms the basis for conceptualisation and theory building. Grounded theory methods imply both inductive and deductive logic (Glaser, 1978). Inductive reason is applied to develop theories, because these theories are developed after the data collection begins. Once the collected data is coded, the researcher applies deductive logic to conceptually determine the data collection necessary to generate further theory.

Theory building in traditional grounded theory involves theorising about interactions between individual people. Lehmann and Fernandez’s paper considering the application of grounded theory to the information systems discipline state that in their discipline it is “essential to extend this focus to the interaction between groups of people and organisations, typically in the form of case studies” (Lehmann and Fernandez, 2007). This paper, published in 2007 by Lehmann and Fernandez, is a seminal work addressing the application of grounded theory methods to case study research.

As explained in Section 3.5.1, this research used a case study approach. A comparison (Lehmann and Fernandez, 2007) of Yin’s traditional case study method (requiring

elements such as ‘multiple sources of evidence’, ‘explanation building’, and ‘replication logic in multiple cases’) and Glaser and Strauss’ guidelines for grounded theory research (requiring elements such as ‘add data until theoretical saturation’, ‘establishing relationships between categories’, and ‘theoretical sampling determines multiple cases’) found that most differences between the two approaches related to terminology. It was concluded that the use of grounded theory methods in a case study approach was therefore capable of producing “good theory” (Lehmann and Fernandez, 2007).

When applied to research such as this, with three distinct cases (see **Chapters 5-7**) informed by an evaluation of the Scheme which defines the cases’ environment (see **Chapter 4**), the adaptation of grounded theory methods to case study research involved:

- Intra-case sampling – continued analysis of data in a single case until new data does not add to understanding of that case
- Inter-case sampling – the theoretical frameworks developed from the intra-case sampling are assessed for ‘saturation’, to ensure that all theorems and propositions related to the developed theoretical frameworks are as complete as possible, based on *all* data collected from *all* cases (Lehmann and Fernandez, 2007).

Lehmann and Fernandez’s paper (2007) established detailed steps for the application of the grounded theory method to case study research, and the deliverable for each of these steps. This process is presented in Table 3.1 below.

*Table 3.1: Grounded Theory Method for Case Studies: Detailed steps (Lehmann and Fernandez, 2007)*

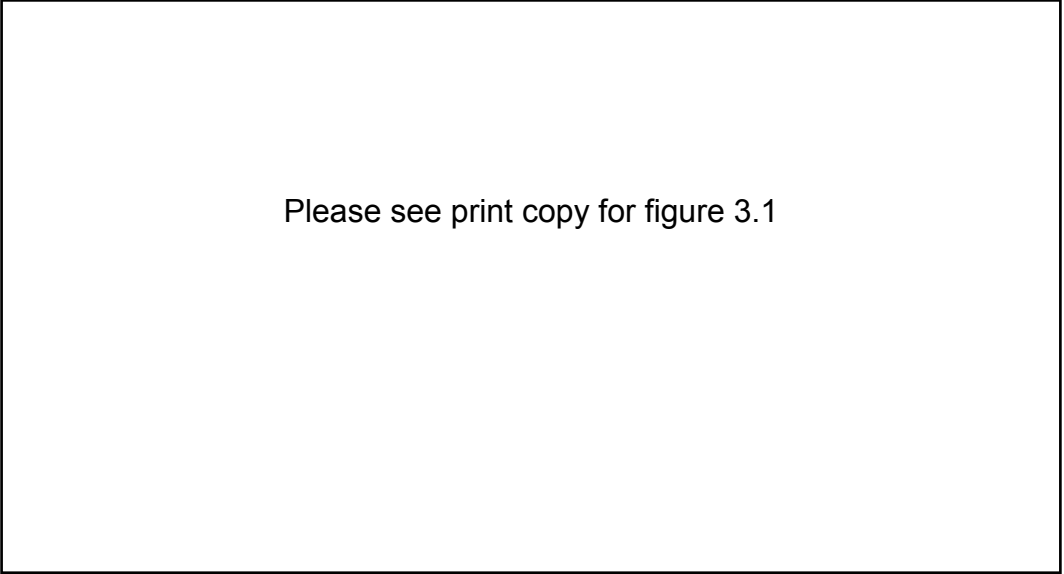
<i>Analysis Steps</i>	<i>Results and Deliverables</i>
1. 'Open' Coding of 'incidents' in the interview transcripts and supporting documents, the 'texts'	Basic, 'raw' categories and properties
2. Assembling the network of individual texts, i.e. writing the 'story' of the case	Case history/story
3. Using the 'story' for reviewing, refining and collapsing the basic categories, based on uniform and/or overlapping properties; merging raw categories into families of 'substantive' categories and further reducing these to 'core' categories	Hierarchy of 'core' categories embracing 'substantive' categories, formed from 'raw' categories
4. 'Theoretical' Coding of the case 'story' for 'relations' between core categories; this is for the case in hand, although the categories and relations from previous cases are used in constant comparison	Identifying main interactive categories; distinction between primary and secondary interaction; identifying direction of linkages; defining the specific nature of each interaction
5. Establishing and refining categories and their linkages	Models of the interaction of all categories, in groups and <i>in toto</i> , and preliminary theory write-up of descriptions and propositions
6. Comparing between cases, 'stories' as well as individual 'texts'	Establishing the differences between the cases, by contrasting the case in hand with each of the previous cases in turn
7. Establishing and refining the theoretically relevant differences between the cases	Distilling and new, 'derived' categories and relationship 'constructs' from the comparative analysis
8. Distilling theory elements from both the case in hand and from the comparative analysis	Theorems and propositions, forming the 'nth-generation' of the (provisional) Theoretical Framework
9. 'Densifying' the (provisional) Theoretical Framework by comparison with its previous 'generation'	Revised 'nth-generation' (provisional) Theoretical Framework
10. Delimiting and 'axiomatising' the last generation (provisional) Theoretical Framework	Final <b>Substantive Theory</b>

While presented as a linear process for the sake of simplicity, Lehmann and Fernandez (2007) "stress the spiral nature of [grounded theory method] research in action." One of the key ideas expressed in these steps is the hierarchical relationship between texts (as the basic building blocks), case stories, viewing all case stories as a whole, and theory building (as the ultimate goal).

### 3.5.2.3 Use of Emerging Issues Analysis to Identify Issues

The process for the identification of issues within the application of the grounded theory methods used concepts established in *emerging issues analysis* (Molitor, 1977). Emerging issues analysis is based on the assumption that issues follow an s-pattern growth curve; they begin as *emerging*, move to *trend*, then finally reach *problem* (Inayatullah, 1998). *Problems* will be referred to as ‘issues’ throughout **Chapters 4-9** of this thesis.

In contrast to trend analysis, which is concerned with issues which are, or are about to become ‘mainstream’ (i.e. existing trends, which early adopters are already embracing), emerging issues analysis is concerned with identifying potential trends. These potential trends are located in the initial stage of the s-pattern. Emerging trend analysis is useful in situations which do not have enough data to conduct traditional trend analysis; one example of such a situation is the investigation of pilot cases, as in this research. See *Figure 3.1* below for a graphical representation of the s-pattern and the place of emerging issues on this s-pattern. This figure is based on the work of Graham Molitor, who established the concept of emerging issues analysis. The purpose of identifying potential trends is to identify areas requiring the development of community or policy responses in the future (Lang, 1995).



Please see print copy for figure 3.1

*Figure 3.1: Life cycle of a trend (Thinking Futures, n.d.)*

Issue identification in emerging issues analysis is an experiential process. When a particular issue is seen or experienced three times, it is recorded and future instances of this issue are investigated (Thinking Futures, n.d.).

The process of initial issue identification used in emerging issues analysis was applied to this research. As in grounded theory methods, all ‘incidents’ were coded initially; repetition of identical or highly similar incidents were identified; and issues which were noted three or more times (based on observation and/or experience) were further investigated. The issues identified throughout **Chapters 4-7** in this thesis represent those which were noted three or more times.

#### *3.5.2.4 Applying grounded theory and emerging issues analysis*

Categories for analysis were developed as they were identified in the various sources of data, and these categories were maintained across all data sources. Individual issues were identified, and those deemed relevant (based on emerging issues analysis, see Section 3.5.2.3) are noted in **Chapters 4-7**. Common themes and related issues experienced by all three test cases were identified from the comprehensive range of data

collected from the communities (as per grounded theory methods). This information was used to better understand the issues faced, and identify relationships between the issues.

Analysis of notes from a variety of data sources, including observations and interviews, was used to understand the events, relationships and interactions observed. These issues were classified as part of the grounded theory approach, and these classifications are presented in Appendix J. Becker et al. (1979 cited in May, 2001) recommend the development of a theoretical framework to explain these events, relationships and interactions. The theoretical framework in this research included not only written identification and description of issues, but graphical representations of these issues and their relationships. The graphical representations, developed based on information obtained from primary data sources, and substantiated using secondary data, are referred to in this research as *models*. Final theories are presented in **Chapter 8**.

### ***3.5.3 Data Sources and Collection***

The data collected about the CGDN Scheme (see Section 3.6) had a significant overlap with the data about the evaluation of the CGDN Projects (see Section 3.7), and the review of the CGDN Projects informed the review of the CGDN Scheme. The experiences of the CGDN Scheme and CGDN Projects were used as the basis for the development of models (see Section 3.5). Due to the significant overlap in the data collection and analysis, this section will provide the majority of the information on all data collection and analysis in this research. See Section 3.5.2 for a detailed discussion of the grounded theory methods used in the analysis of the data.

A range of data was collected and analysed over a three-year period to provide a rich, detailed description of the test case experiences (Creswell, 2003). All four data types that can be collected in a qualitative study were included in this research; observations, interviews, documents, and audiovisual materials (Creswell, 2003). This approach of triangulating from multiple sources has been deemed to be the most effective method for evaluating community projects involving information technology (O'Neil, 2002; Myers, 2005), allowing comparison of data from multiple sources and perspectives. The



data collection methods used to document the experiences of the three CGDN Projects, and the CGDN Scheme, will be presented in the following sections.

The experiences of CGDN Project members and the CGDN Project facilitators, and the individuals and organisations managing the trial of the CGDN Scheme itself, were recorded using primary data sources (i.e. through direct communication with these individuals and organisations) (Creswell, 2003). The organisations managing the trial of the CGDN Scheme were One City One Site (OCOS), the .au Domain Name Administrators (auDA) and .au Community Domains (auCD). These data sources included interviews, teleconferences, observation, surveys, web-based communication and informal communication via e-mail and telephone. These data will be discussed below. Analysis of some data sources will be discussed in this section. Where appropriate, documentary analysis was used to evaluate data collected from the sources discussed in this section. See Section 3.5.2.3 for a more detailed discussion of documentary analysis.

A grounded theory approach was used to identify issues for inclusion in the models, which is “based upon the researchers’ interpretation and description of phenomena based on the [community participants’] subjective descriptions and interpretations of their experiences” (Akhavan et al., 2006, 99) and the other rich data collected from and about the test cases.

#### *3.5.3.1 Interviews*

Interviews were conducted with CGDN Project members and CGDN Project facilitators from all three CGDN Projects. These interviews were semi-structured, with standard questions developed for use in all interviews and specific questions relevant to the interviewee’s CGDN Project and/or role. These tailored questions were informed by data collected previously (from a range of sources including teleconferences, documentary data, Yahoo! groups and previous interviews) and the data collected at an earlier point in the interview. A semi-structured interview is one which uses specified questions, but allows the researcher to “seek both clarification and elaboration on the answers given” (May, 2001, 123). The consistency across interviews allowed

experiences and perceptions to be compared, while allowing the researcher to probe beyond the initial answers supplied, providing the advantages of both structured and unstructured interviews. Digital recordings of the interviews were used to support the minutes taken where necessary, and ensure the researcher accurately recorded the interviewee's perceptions (May, 2001). The interviews were conducted in June-July 2004, with members and facilitators of all CGDN Projects interviewed at this time. Five members and two facilitators of the Wollongong CGDN Project, and 13 members and one facilitator of the Bathurst CGDN Project, were interviewed. Only one member of the CGDN Project and the facilitator were available in Ballarat. Due to the limited number of active members in the Ballarat CGDN Project, an interview was also conducted with an individual who had been involved in the CGDN Project in the early stages, but had left the CGDN Project before the time of that interview. The interviews allowed personal experiences to be recorded, and helped to provide a rich description of the varied points of view of the individuals involved. Interview data was classified based on the interviewee's response to the event or issue being discussed, and was then evaluated (Whyte, 1981). The researcher's ability to build an understanding of the relationships between interviewees and their position within the context studied allowed the interview data (in conjunction with data from other sources) to 'build up a picture' (May, 2001) of the overall situation. Despite the advantages of using interviews, there were two significant problems with conducting repeated interviews with members of all CGDN Projects. The CGDN Projects were geographically disperse, making it impractical to visit all of them regularly, and interviewers can have a significant influence on the quality of the data collected and the level of objectivity (May, 2001). For these reasons, a variety of other methods of data collection were used.

Semi-structured interviews were conducted with the OCOS Project Manager, the Chief Executive Officer and the Chief Policy Officer at auDA, and the auCD General Manager. The OCOS Project Manager was interviewed on multiple occasions throughout 2004 and 2005. The interview with the auDA staff members occurred on August 17, 2004 (see Appendix A for questions). Numerous semi-structured interviews were conducted with the auCD General Manager throughout 2006 and 2007. Digital recordings of the interviews were used to support the minutes taken where necessary. Interview questions were informed by previous data collected and the data collected in the interview. The interviews allowed alternate perspectives to be recorded. The OCOS

Project Manager provided information about the OCOS Project, including her opinion on whether each CGDN Project had adhered to OCOS Project and CGDN Scheme requirements. The two auDA staff members discussed their experiences with the development of CGDN Policy, establishment of the OCOS Project, selection of communities for the CGDN Scheme trial, and implementation of the CGDN Scheme through the three CGDN Projects. The development of resources for CGDN Projects which begin after the completion of the trial, the national launch, and uptake of CGDNs was addressed in interviews with the auCD General Manager.

#### *3.5.3.2 Teleconferences*

Data was gathered from the facilitators of the CGDN Projects and the OCOS Project Manager by means of regular teleconference meetings, which were also attended by the researcher. Facilitators for each of the three CGDN Projects were invited to participate in teleconferences with the OCOS Project Manager every four to six weeks between April 2004 and July 2005. These meetings were recorded using a digital voice recorder, and minuted by one of the facilitators. During these teleconferences, the OCOS Project Manager provided information from auDA, and advised the facilitators of the recommendations she was making to the National Reference Group about the trial of the CGDN Scheme. The meetings provided facilitators with an opportunity to receive an update on the other CGDN Projects and share any experiences, problems or suggestions. This was particularly useful in the early stages, during the community consultation and formation of legal entity stages of the trial of the CGDN Scheme, as all three CGDN Projects raised similar concerns. The teleconferences also allowed the OCOS Project Manager to inform the facilitators of progress made by auDA.

#### *3.5.3.3 Observation*

The researcher's attendance at community meetings and management group meetings allowed the processes, issues and interactions of CGDN Project members to be observed. Observation makes "no firm assumptions about what is important" (May, 2001, 148), but is concerned with researchers immersing "themselves in the day-to-day activities of the people whom they are attempting to understand" (May, 2001, 148). One

of the advantages of observation is that it informs the researcher, assists in the development and selection of questions to directly ask of those involved, and puts all data gathered into a context (Whyte, 1984). Involvement from the broader community at related functions, such as the website launches, was also observed and recorded. The evolution of each community website was observed via the Internet, with screenshots taken of each community website on a monthly basis to assist in documenting these observations. Analysis of notes based specifically on observations identified “typical and widespread” (Becker, 1979 cited in May, 2001, 164) events, and these events were checked against other data sources to ensure observational notes did not contain obvious bias (May, 2001).

#### *3.5.3.4 Surveys*

Self-completion surveys (May, 2001) were e-mailed to all members of the three CGDN Projects, and completed on a voluntary basis. Each survey contained standard questions for all respondents, and some specific questions for each CGDN Project. A combination of opinion and open-ended questions were used (May, 2001). The survey was tested by a facilitator from the Wollongong CGDN Project, to ensure questions were clear and unambiguous prior to e-mailing out the surveys to all recipients. The survey did not include demographic questions, however it did ask the individual to identify their role in their CGDN Project. Responses to the first survey were received from members and facilitators in all CGDN Projects (17 responses from 20 surveys sent). Response to the second survey was lower (nine responses received from 18 surveys sent), with no responses received from the Ballarat CGDN Project. Overall, a high response rate was achieved. It is likely that the high response rate can be attributed to the selection of survey recipients, with all recipients demonstrating their interest in the topic through their involvement in the CGDN Projects (May, 2001). Responses to the surveys were not formally coded; they were used to identify issues and their relationships.

#### *3.5.3.5 Online Discussion Group*

A Yahoo! group was established by the OCOS Project Manager for each CGDN Project. The facilitator of each CGDN Project was given the ability to add members to their Yahoo! group based on CGDN Project membership. The OCOS Project Manager

was a member of each Yahoo! group. The Yahoo! group provided a facility for members to communicate online, and allowed the OCOS Project Manager and facilitator to provide a timely response to any challenges or questions raised by the communities. The Yahoo! group automatically recorded all interactions. Observation of these interactions on the Yahoo! group was possible because the researcher was a member of all Yahoo! groups, and therefore received access to all communication conducted using this facility.

#### *3.5.3.6 Informal Communication*

As a result of relationships established through the interviews and teleconferences, ongoing informal communication the researcher maintained with the CGDN Project members and facilitators, and the OCOS Project Manager and auCD General Manager. This communication was conducted through e-mail and telephone. The researcher kept minutes of all telephone calls and information from e-mails. These informal communications enhanced understanding of CGDN Project members', facilitators', the OCOS Project Manager's and the auCD General Manager's experiences during the trial of the CGDN Scheme.

#### *3.5.3.7 Documentation*

An extensive set of documentary data (secondary data source) was used to supplement the data collected from CGDN Project members, CGDN Project facilitators, the OCOS Project Manager, auDA staff, and the auCD General Manager, providing data about situations that could otherwise have not been observed or recorded (Holloway, 1997). Documentary data may include text-based or non-text-based documents, "consisting of written documents and records as well as graphic presentations and photographs or films" (Holloway, 1997, 50).

While various quantitative methods (Fielding and Lee, 1991; Hansen, 1995; Leximancer, 2007) were considered for documentary analysis, these methods were discounted due to significant variations in the number and quality of documents produced by the three CGDN Projects, and the lack of concern for context (May, 2001).

The use of such quantitative methods would have been likely to skew the results. Instead, qualitative context analysis was used to 'read' the documents within an understanding of their context (May, 2001), with the researcher identifying what is relevant and piecing this together to create patterns (Ericson et al., 1991). The use of qualitative context analysis has been previously established for Community Informatics research (Stillman, 2006). Categories used across all data sources were used as the basis for recording the documentary analysis. Where necessary, categories were extended to accurately record the documentary analysis. When conducting this type of analysis, researchers have emphasised that "Full coverage [of the data] is impossible, equal attention to all data is not a civil right" (Creswell, 2003, 195). The identification of issues and grouping of these issues into categories is done in a search for meaning, rather than an attempt to describe every element of the data being summarised (Creswell, 2003).

Documentary research "covers a wide variety of sources, including official statistics, photographs, texts and visual data" (May, 2001, 175). Each document "represents a reflection of reality" (May, 2001, 182) and provides "material upon which to base further investigations" (May, 2001, 175). Documents tell the reader "about the way in which events are constructed" (May, 2001, 175), and may be classified as 'public' or 'private' (May, 2001). Documents produced by government departments are usually public documents, as are the CGDN Policy documents. Documents can also be classified as 'solicited' and 'unsolicited' (Burgess, 1990), based on whether they were produced for the purpose of further research. The reports completed by the CGDN Projects were solicited documents, written for a specific audience. This context influences the style and content of the documents, and requires consideration of the requirements under which they were developed (May, 2001).

A standard process for data analysis in qualitative research was used as the basis for data analysis in this research (Creswell, 2003). The collected data was organised and prepared for analysis, and all data was read to develop a general sense of the available information. General notes were written and patterns in the data recorded (Stake, 1995, 78; Strauss and Corbin, 1998; Creswell, 2003). Prior to reading the data, a list of general terms was developed based on previous research and experiences of the CGDN Scheme

and CGDN Projects, as recommended by Miles and Huberman (1994). These terms were used as the basis for recording notes, and allowed for a more efficient analysis.

The documentary analysis conducted in this research was based on ‘practical reasoning’ (Cicourel, 1976 cited in May, 2001) where the expectations, experiences and perceptions of those producing the documents was considered as ‘fact’ (Zimmerman, 1974 cited in May, 2001), while recognizing that the understanding of these documents was open to negotiation (May, 2001). Through the researcher’s deep understanding of the authors of these documents and the environment in which these documents were developed, the documents were read in an engaged manner (May, 2001) with an awareness of the role of these documents within the broader case study. Scott (1990 cited in May, 2001) proposed four criteria for “assessing the quality of the evidence available from documentary sources” (May, 2001, 189): authenticity, credibility, representativeness, and meaning. These four criteria were considered when reviewing documentary data, in conjunction with assessments of completeness and accuracy (as recommended by March and Smith (1995)) made based on the data collected from multiple other sources.

After the initial read-through, data was categorised into related units, and concepts were labeled or (‘coded’) using the language of the documents (Tesch, 1990; Miles and Huberman, 1994; Holloway, 1997). This coding was used to develop practical understanding of meanings and actions rather than structured coding of the data. Each relevant piece of information was identified as describing a general issue that may have an impact on the success of the community website being described. This process sought to develop a practical understanding of meanings and actions in the data, rather than produce a structured coding of the data (Tesch, 1990). This process of analysing data in a detailed manner is described using many terms (for example, microanalysis (Strauss and Corbin, 1998)), and can be applied at many levels of granularity, from analyzing each word (Strauss and Corbin, 1998) to more general ‘concept’ identification (Miles and Huberman, 1994). After all concepts were categorised, these categories were collapsed into themes (Holloway, 1997). Arranging issues into a small number of themes made the data more manageable, and allowed diagrammatic representations of the relationships, such as models (see Section 3.5) to be developed (Tesch, 1990; Creswell, 2003).

After detailed analysis of data from all data sources, a discussion of the themes and their relationships, issues, perspectives and experiences was represented in a qualitative narrative (Creswell, 2003) (see **Chapters 4-7**). Upon completion of the writing of the narrative, the final step in data analysis was to determine the meaning of the data (see **Chapters 4-7**) and the ‘lessons learned’ from the research (Miles and Huberman, 1994; Creswell, 2003).

The CGDN Policy defines the CGDN Scheme. Multiple versions of the CGDN Policy were published between 2003 and 2006, with the final version published in April 2006. Documentary analysis was conducted on these policy documents, and the changes in policy versions were used to inform interview questions with CGDN Project participants, CGDN Project facilitators, and those managing the CGDN Scheme.

The OCOS Project procedures, defined by staff from the NSW Office of Information and Communication Technology (OICT), required each CGDN Project to complete three reports about their progress and experiences during the formation, planning and development of their community website. These three reports were only completed by the three CGDN Projects trialling the CGDN Scheme, and were not required for the communities licensing a CGDN after the public launch. The reports were completed by the CGDN Project members in conjunction with their facilitators. Documentary analysis was conducted on the three reports from each CGDN Project. The three reports (see OCOS Test Case Reports) were:

- Report 1 – Initial Community Consultation / Development & Involvement, requiring participants in the test cases to evaluate and provide feedback about the community consultation process, including community awareness of the CGDNs.
- Report 2 – Website Planning & Development, providing feedback about the website planning process and outlining how members would develop the community website.
- Report 3 – Community Test Case Feedback, providing feedback from members about the overall process, as well as their opinion of the viability and future of the CGDN Scheme.



Each of the three CGDN Projects was required to complete a Domain Name Application (see Domain Name Application) to officially apply for their CGDN licence. These Domain Name Applications, in conjunction with verbal feedback from assessors of the Domain Name Application, were received by the researcher.

The online Yahoo! groups used by each of the CGDN Projects allowed members to upload files into a shared repository, and record ideas and issues in a database.

Facilitators of each CGDN Projects were required to complete a weekly report (see Weekly Report Template). Each weekly report contained an update on the progress of the CGDN Project, and all the activities that had taken place in that particular week. These weekly reports served as a useful record of the progress of each CGDN Project and documented any challenges faced. While these reports were valuable, it is likely that did not contain a full picture of the situation because they were completed by the facilitator rather than the entire CGDN Project membership.

#### *3.5.3.8 Reflections*

**Chapters 4-7** of this thesis describe and analyse the CGDN Scheme and the three test cases used in its trial. Each of these chapters draws together information from a number of the sources detailed above to inform the discussion. The analysis of each chapter's findings is presented in summary form under the heading 'Reflections' at the conclusion of the relevant chapter. These Reflections contributed to the identification and expression of the *lessons learned* (see Sections 8.8.2 and 8.9.2).

#### *3.5.3.9 Summary of Data Collection and Analysis*

The previous sections have described the evaluation approach and all techniques used in this research. Sections 3.6 and 3.7 will identify which of these identified techniques (and related data sources) were used in the evaluation of the CGDN Scheme and CGDN Projects respectively.

## 3.6 Evaluating the CGDN Scheme

### 3.6.1 Purpose

The CGDN Scheme (as proposed by auDA) was evaluated using the CGDN Policy and related documentation, and through the evaluation of three instantiations of the CGDN Scheme, called CGDN Projects (see Section 3.7). The development of the CGDN Scheme and its Policy were monitored (*research goal i*) and the viability of the CGDN Scheme was evaluated (*research goal iii*) to inform a deeper understanding of the issues associated with government-initiated, structured community website schemes.

### 3.6.2 Data Collection and Analysis

The data collected for the evaluation of the CGDN Scheme had a significant overlap with the data collected for the evaluation of the CGDN Projects. Due to the significant overlap in the data collection and analysis, details were presented in Section 3.5.2.

Table 3.2 below presents a summary of the types of data used in the evaluation of the CGDN Scheme.

*Table 3.2: Data sources for CGDN Scheme evaluation*

<b><i>Data Sources</i></b>	<b><i>CGDN Scheme</i></b>
Interview	X
Teleconference	
Observation – in person	
Observation – Internet-based	X
Surveys	
Web-based communication	
Informal communication	X
Documentary analysis – secondary data sources	X
Documentary analysis – policy documents	X

## 3.7 Evaluating the CGDN Projects

### 3.7.1 Purpose

The CGDN Projects (as instantiations of the CGDN Scheme proposed by auDA) were evaluated using data collected from CGDN Project participants and facilitators, as well as individuals and organisations managing the trial of the CGDN Scheme, and

documentation. Various approaches to developing community websites were considered (*research goal ii*) and issues were identified, explored and recorded (*research goal iv*) to inform a deeper understanding of the issues associated with government-initiated, structured community website schemes.

### 3.7.2 Data Collection and Analysis

The data collected for the evaluation of the CGDN Projects had a significant overlap with the data collected for the evaluation of the CGDN Scheme. Due to the significant overlap in the data collection and analysis, details were presented in Section 3.5.2.

Table 3.3 below presents a summary of the types of data used in the evaluation of the CGDN Scheme.

*Table 3.3: Data sources for CGDN Projects evaluation*

<b><i>Data Sources</i></b>	<b><i>CGDN Projects</i></b>
Interviews	X
Teleconference	X
Observation – in person	X
Observation – Internet-based	X
Surveys	X
Web-based communication	X
Informal communication	X
Documentary analysis – secondary data sources	X
Documentary analysis – policy documents	

Due to large geographic distances between the three CGDN Projects, it was impractical to observe each of them to the same degree. The CGDN Projects were located in Wollongong, Bathurst and Ballarat (see Section 4.5). Standard data and materials were collected from all three CGDN Projects. The Wollongong CGDN Project was observed the most closely, including the researcher regularly attending association meetings and speaking at least monthly with members and the facilitator of the CGDN Project. The experiences of the Bathurst CGDN Project were obtained through attendance at formal meetings, and ongoing informal telephone, e-mail and web-based communications. Ballarat experienced significant changes in leadership of the project while the CGDN Project was being conducted. Interviews were conducted with both of the official facilitators of the Ballarat CGDN Project, and with two members of the development

group. Only a small number of people (less than five) were actively involved in the development of the Ballarat community website, so it was more difficult to gain a variety of perspectives in the Ballarat CGDN Project than the other two CGDN Projects. See Section 3.5.2 for a detailed description of the data collection and analysis methods used to inform the evaluation of the CGDN Projects.

### **3.8 Conclusion**

This chapter has discussed the difficulties associated with selecting an appropriate framework for Community Informatics research. The methodology for this research was described, and was linked to the achievement of the five research goals. A case study approach using grounded theory methods was used to record the experiences related to the trial of the CGDN Scheme. Specific issues of concern were recorded based on emerging issues analysis, which is concerned with identifying issues likely to require a community or government policy response in the future. This approach is closely linked to the concerns of the CI field in general, which aims to facilitate dialog between policy makers, academics and practitioners on matters of relevance. The evaluations of the CGDN Scheme and three CGDN Projects (instantiations of the CGDN Scheme) used similar data sources, data collection techniques and data analysis methods. Based on these evaluations and the classification of identified issues, models were built to describe the issues that affect the viability of CGDN websites, and the relationships between these issues (see **Chapter 8** and **Appendix J**). From the research, lessons related to the CGDN Scheme, and to government-initiated schemes for community websites more generally, were established (see **Chapter 8**). The following chapters will present an evaluation of the CGDN Scheme (**Chapter 4**), and evaluations of the three CGDN Projects (**Chapters 5-7**).

## **Chapter 4: Monitoring the CGDN Scheme and Policy**

### **4.1 Introduction**

In 1997, the Australian domain name administrators introduced restrictions to prohibit the licensing of all third-level domains (3LDs) in the com.au and net.au namespaces that corresponded to Australian geographic locations (.au Domain Administration, 2004). While minimising misuse of these valuable and culturally-significant names, these restrictions prohibited communities from licensing domain names that represented their geographic location. In an attempt to allow legitimate use of domain names that correspond to Australian geographic locations, a new structured approach to geographic community websites in Australia was considered in the late 1990s and formally proposed in 2002 (.au Domain Administration, 2005). The .au Domain Name Authority (auDA) decided to establish a set of new second-level domains (2LDs) in 2002, to be used by geographic communities (.au Domain Administration, 2005).

The scheme is called Community Geographic Domain Names (CGDNs). A new 2LD was approved for each Australian state and territory: act.au, nsw.au, nt.au, qld.au, sa.au, tas.au, vic.au, and wa.au. The purpose of the 2LDs is to allow each geographic community group to have access to a domain name that is representative of their physical location. For example, the suburb of Wollongong in the state of New South Wales is represented by www.wollongong.nsw.au. The following section will describe the proposal of Community Geographic Domain Names (CGDNs) by the Australian Domain Name Administrators (auDA), the subsequent trial of the CGDN scheme by three test case communities, and the policies developed to govern the CGDN scheme.

Community groups that establish a community website under this scheme must ensure that the website is Community-Based and Community-Driven (CBCD) (auDA National Reference Group, 2004). The requirements of the CGDN model, and the support from auDA, provide the CGDN websites with credibility because community groups must prove their legitimacy before obtaining their CGDN. Despite the underlying differences in approach, the CGDN websites face similar challenges to other community websites that are developed independently and with external funding. At the XXIII International FIG Congress in Munich, Germany, Paul Harcombe (a member of auDA's National

Reference Group) promoted the CGDN Scheme as able to “overcome isolation and bring communities together to function and interact as a cohesive group using the World Wide Web - which is ubiquitous” (.au Community Domains Trust, 2006d).

## **4.2 Proposal for CGDNs**

Three submissions were made to auDA in 2002, proposing a new domain name space solely for community use. Each submission outlined the writer’s preferred structure and management procedures for these domains. The first submission was dismissed because it did not provide documented support from relevant stakeholders and had a lack of community focus (.au Domain Administration, 2006b). The other two submissions, from cBallarat with the City of Ballarat, and the One City One Site (OCOS) Working Party, were very similar (.au Domain Administration, 2006b). The OCOS Working Party spent over 2 years developing the CGDN concept and associated process, and had received ongoing feedback from auDA’s Name Policy Advisory Panel and auDA’s New Names Advisory Panel during this time (.au Domain Administration, 2006a). The New Names Advisory Panel approved the ideas proposed by cBallarat and OCOS, and gave support to the domain name structure (.au Domain Administration, 2006b).

## **4.3 Approval for CGDN Trial**

Based on advice from OCOS and the New Names Advisory Panel, the auDA Board acknowledged that much of the operational detail of the proposed CGDNs could only be resolved in practice. Responsibility for operational processes was allocated to the National Reference Group in conjunction with auDA (.au Domain Administration, 2002a). The first meeting of the National Reference Group was held on August 29, 2003 (.au Domain Administration, 2003a). To ensure that the CGDN policies were comprehensive, a trial of the CGDNs, managed by OCOS, was approved (.au Domain Administration, 2002a).

The OCOS Project was initiated to test the proposed CGDN Model. Originally, it was planned that the OCOS Project would include four test cases representing various types of communities, such as a regional centre, urban suburb, large rural city and small rural town. A diverse set of test cases was preferred because of the different social situations

that would occur in different types of communities. It was hoped that the test cases could be conducted in various states or territories, with the relevant state governments providing the required finance to pay a facilitator.

When the OCOS Project became a reality in 2003, hosted by the New South Wales (NSW) state government's Office of Information and Communication Technology (OICT), OICT invited all other states and territories to host their own test case as part of the project. Each participating state/territory was required to provide the necessary financial resources for their test cases (.au Domain Administration, 2002a). No other state or territory was willing to provide the financial backing to conduct test cases as part of the OCOS Project. Government agencies in the Australian Capital Territory were interested in the project and wanted to participate, however funding resources were not available. OICT assumed responsibility for the OCOS Project, and then assumed responsibility for finding test case communities with facilitators who were willing to undertake the process without financial assistance. OICT resources were limited to one full-time project manager.

#### **4.4 CGDN Policy Features**

The CGDN Policy and the related Model trialled by the three test case communities were based on the OCOS submission made to auDA in 2002 (.au Domain Administration, 2003b). Key features of the CGDN Policy which differentiated these community domain names from standard Australian domain names are presented below.

##### ***4.4.1 Community Group***

Licences for CGDNs can only be granted to community groups that meet all requirements specified in the CGDN Policy. It is not possible for an individual or single entity to obtain the licence to a CGDN. For the purposes of the CGDN Scheme, a local council is considered to be a single entity, and therefore cannot license a CGDN without wider community involvement. The community group must adhere to membership requirements for its legal entity, with the CGDN Policy recommending a minimum of 8 community members is required (auDA National Reference Group, 2004).

#### ***4.4.2 Geographic Domain Names Available for Registration***

When establishing the new 3LDs (domain names at the community level), auDA sought to base its classification and description of the names on an existing geographic classification structure. A range of classification methods were considered, including postcode boundaries, and geographic regions. While popular with locals and tourists, classification by region name was not feasible due to the inconsistency of region boundaries. In many locations, a single postcode is used to cover an extremely large geographic area with a diverse population, and no single identity. As a result of such issues, these classifications were deemed inappropriate. The final, complete list of Community Geographic Domain Names (CGDNs) available for registration was listed in a registry database. Each ‘addressable locality’ (i.e. a suburb, town or city) within Australia, as defined by the Committee for Geographical Names in Australasia, was assigned a CGDN.

National uniformity of domain names under the CGDN Scheme was determined to be of high importance (.au Domain Administration, 2002b). Eight new second-level domains (2LDs) were created to represent the eight Australian states and territories: act.au, nsw.au, nt.au, qld.au, sa.au, tas.au, vic.au, wa.au (.au Domain Administration, 2002a). Each of the ‘addressable localities’ were created as third-level domains (3LDs). The CGDN for each locality uses the format *locality.state/territory.au*, for example sydney.nsw.au, canberra.act.au and carlton.vic.au (.au Domain Administration, 2002a). Processes were developed for assigning CGDNs where both a suburb and city existed with the same name within the same state or territory (.au Domain Administration, 2002a). Some localities within Australia which were considered to be of ‘cultural significance’, such as the Great Barrier Reef and Uluru, were specifically restricted from being assigned a CGDN (auDA National Reference Group, 2004).

One difficulty posed by pre-defining the available domain names is that communities are not able to negotiate their own boundaries. The Committee for Geographical Names in Australasia specifies the legal boundaries for each of the localities. The ability to define boundaries is critical to the idea of a ‘community’, because it allows members to determine who can and cannot join (Mieszkowski, 2000). Therefore, the ability for a community to make these decisions is vital. Previous research has also raised the



question “*how big can a community get before it suffers?*” (Mieszkowski, 2000). By pre-defining the locality boundaries, community size is pre-defined. These issues are likely to affect the experiences of those involved in community websites developed under the CGDN Scheme.

#### ***4.4.3 Legally-registered, Not-for profit Entity***

Before being granted the licence to a CGDN, the community group must provide proof of its legal registration and not-for-profit status. Three legal options meet the legal requirements: company limited by guarantee, incorporated association and registered cooperative. The community group must also demonstrate how it will finance the website while adhering to its not-for-profit status (auDA National Reference Group, 2004). No central source of funding is provided for CGDN communities. Previous research has found that Community Informatics projects often experience difficulties as they strive to provide free services to community members, raise enough money to survive, minimise stress on volunteer workers, and adhere to their non-profit status (Beamish, 1995).

Due to the failure of previous ICT projects funded by the government, auDA and the Australian federal government require communities participating in the CGDN model to be self-funding. It is expected that communities will take greater responsibility for their community website if they are funding it, and as a result a higher success rate is expected for the projects.

#### ***4.4.4 Representative of the Local Community***

Before being given ownership of a CGDN, the community group must demonstrate that they are representative and inclusive of the local community that is described by the domain name (auDA National Reference Group, 2004). Any person who lives or works within the geographic area described by the domain name should be eligible to become a member of the community group. ‘Representative’ is defined in the CGDN Policy as “*a reasonable cross-sample or typical embodiment of the local residing population reflecting the variety of interests of those residing in the local area; and relevant to and generally accepted as a representative sample of the ‘local community’*” (auDA

National Reference Group, 2004, 3). The CGDN Policy requires the community group membership to represent “*a broad range of community interests and groups*” (auDA National Reference Group, 2004, 3). Election of both members and officers is advised to take into consideration who is the ‘most appropriate’ representative of that section of the community. This requirement places a heavy burden on the group at an early stage, because it involves activities such as community consultation and publicity, both of which require funding.

#### ***4.4.5 Licensing Period***

CGDN Licences are granted for a period of two years (auDA National Reference Group, 2004). The community group must re-apply for licence renewal after two years, and demonstrate that they have met the CGDN Policy requirements during that licensing period, that the community group still meets eligibility criteria, and that it is using the CGDN to operate a community website (auDA National Reference Group, 2004).

#### ***4.4.6 Community Website Operation***

CGDN Policy states that the licensee “*must use the domain name solely for the purpose of operating a community website on behalf of the local community*” (auDA National Reference Group, 2004, 5). This community website must “*be developed for the benefit of the entire local community*” (auDA National Reference Group, 2004, 5). The use of a CGDN for commercial uses, or for the interest of an individual or single entity, contravenes CGDN Policy.

#### ***4.4.7 Number of CGDNs to be Licensed***

No restrictions have been placed on the number of CGDNs that a single community group may license (auDA National Reference Group, 2004). For example, numerous small adjacent suburbs may form a single community group and use this group to license and manage a single shared website that is representative of all the suburbs involved. However, the community group must meet eligibility criteria for each of the CGDNs.

## 4.5 Selection of CGDN Trial Test Cases

Communities interested in participating in the OCOS project applied to auDA. Due to the financial obligations of each of the test case communities, only three communities applied: Bathurst, Ballarat, and Wollongong. These three communities were selected as the test case communities, based on ‘opportunistic’ sampling (see Section 3.5.1 for further details). The community groups were formed between March 2004 and June 2004. Each of three test case communities received access to their CGDN in early 2006. As shown in Table 4.1 below, each of the test case communities had distinctive characteristics.

*Table 4.1: Test case community characteristics*

	<i>Wollongong</i>	<i>Bathurst</i>	<i>Ballarat</i>
<i>Location</i>	NSW, Australia	NSW, Australia	Victoria, Australia
<i>Description</i>	Large regional city	Medium-sized country town	Large country city
<i>Population</i>	200,000 residents	30,000 residents	85,000 residents
<i>Champion</i>	Local university	State government body located in the community	Organisation answerable to local council

The differences between the test case communities provided the opportunity to observe the impact of community size, type, history, and management on the success of each community (*research goals ii and iv*) (see **Chapters 5, 6 and 7** for further details). A national launch occurred simultaneously with the public release of the CGDNs to all Australian communities in August 2006. Since the public launch in August 2006, numerous communities have applied for CGDNs.

The three OCOS test case communities were deemed appropriate by auDA for the pilot study of the CGDN Scheme. Under this trial, the three communities were required to adhere to a structured process, which allowed their experiences to be recorded and compared. Due to the ability to record the experiences of each test case from their inception, the ability to compare the test cases based on their shared rules, and the fact that only three implementations of the CGDN Scheme exist internationally, these three communities were selected as the case studies for this research. For further details see **Chapter 3: Research Methodology**.

## **4.6 Test Case Requirements**

Each of the test case communities was required to comply with auDA and OCOS documentation requirements, as well as the CGDN Scheme requirements. Members of each community completed regular reporting, including weekly reports and facilitator teleconferences. The weekly reports (see Weekly Report Template) documented the progress of each community, and included all challenges faced. While these reports were valuable in describing the set-up process, often they may not have contained a full picture of the situation because in some cases they were completed by the facilitator or an individual rather than the jointly by the entire management group. To ensure the community's view was recorded, each community group was required to complete three reports during the formation and planning phases. The three reports provided details of the community group members, and their financial, marketing and technology planning. They also included discussions about the long-term viability of the community websites and the mechanisms implemented early on in an attempt to overcome these challenges.

Each test case was also required to complete a Domain Name Application (see Domain Name Application) and submit this to auDA to officially apply for a CGDN. The Domain Name Applications were assessed by multiple assessors, all of which had links with auDA.

## **4.7 Changes to the Scheme**

During the CGDN trial and implementation, changes were made by .au Domain Administrators (auDA) and .au Community Domains Trust (auCD) to the CGDN Scheme and Policy. These changes have raised issues for both the test case communities and communities attempting to license a CGDN in the future. While this research is not conducting a case study of the CGDN Scheme and Policy per se, it is necessary to be aware of the changes that were made to understand their impact on the three case studies.

The remainder of this chapter is structured as follows:

- Each section describes an element of the CGDN Scheme and/or Policy and is divided into two subsections:
  - The sub-section headed ‘Proposed’ describes the element as it was intended in the proposed CGDN Scheme
  - The sub-section headed ‘Implemented’ describes the element as it was finally implemented
- Each section concludes by presenting the issues raised by test case members in relation to that element of the CGDN Scheme and/or Policy.

## **4.8 CGDN Management and Licensing**

### ***4.8.1 Proposed***

An OCOS Management Authority was to be established in each Australian state and territory, with all OCOS Management Authorities coordinated by a National Reference Group. This National Reference Group would be accountable to auDA. Each OCOS Management Authority would assume responsibility for managing the allocation and use of CGDNs in their respective state or territory, conducting marketing campaigns, and assisting communities with the application process. The OCOS Management Authorities would conduct an initial assessment of applications for CGDNs, and when these applications were satisfactory they would be submitted to a national Independent Assessment Panel for final approval (auDA New Names Advisory Panel, 2002).

### ***4.8.2 Implemented***

auDA established auCD in 2005, with the General Manager beginning work in early 2006. auCD is responsible for the management and sale of CGDNs nationally. The auCD General Manager has full control over approval of CGDN applications, and there is no independent review process. While described as ‘independent’, auCD maintains a close relationship with auDA. The Chair of the auCD Board is also the Chair of the auDA Board; two of the four auCD Board members are auDA Board members; and another auCD Board member is an auDA employee (.au Community Domains Trust, 2006c; .au Domain Administration, 2007). One of the members of both Boards was also Chairman of the Intergovernmental Committee on Surveying and Mapping from 2002

to 2004, which is the body that manages the place names used as the basis for the CGDNs.

There is no documented process for managing the use of active CGDNs.

**Issue 1: *Specification and fulfilment of auCD's role***

The auCD General Manager has full control over the CGDN application and management processes, however the rights and responsibilities of auCD and the Community Website Groups have not been formalised.

The test cases received little support from auDA and auCD. This was in contrast to the experiences with the OCOS body, which strongly supported all test cases.

**Issue 2: *Coordinated support for Community Website Groups***

auCD provided minimal support to the Community Website Groups.

Interactions with the Community Website Group members showed the auCD General Manager fostering an attitude of competition with OCOS, rather than working with the OCOS staff to minimise transitional issues and rapidly gain an understanding of the CGDN scheme. On March 17, 2006, the auCD General Manager requested that the Wollongong test case remove all OCOS references and links from the Wollongong community temporary website. At this time, the OCOS website was the only comprehensive source of CGDN information, and no auCD website existed.

auDA's decision to form auCD and appoint a General Manager with no previous knowledge of the CGDN Scheme, and limited experience working in this field, led to significant delays for the test cases. These continued delays placed stress on all test cases, as they attempted to maintain community interest without a community website. This limited the ability to develop long term financial arrangements or on-going commitment to the website through return visits.

**Issue 3: *Organisational issues within & between auDA & auCD***

Selection of an auCD General Manager with no previous knowledge of the CGDN

Scheme, and limited experience working in this field, caused delays that impacted negatively on the test cases.

Of the 12 active CGDN projects (communities with a CGDN website) in April 2007, three were not using the CGDN “solely for the purpose of operating a community website” (.au Domain Administration, 2006c), as required by the policy. No action has been taken by auCD to rectify this situation.

**Issue 4: CGDN Policy poorly enforced**

The presence of numerous CGDNs that do not adhere to the CGDN Policy requirements suggests that auCD is unwilling or unable to enforce the CGDN Policy.

## **4.9 Website Management Groups**

### ***4.9.1 Proposed***

To be eligible to license a CGDN, the registrant would be required to be a legally registered, not-for-profit group, and be representative of the local community (auDA National Reference Group, 2003). With the exception of existing groups established for community ICT projects, all groups should be newly formed. An individual or single entity would not be able to license a CGDN (auDA National Reference Group, 2003). A minimum of eight members would be required for a community group to be recognised (auDA National Reference Group, 2003). Each CGDN applicant group would be required to demonstrate that they had widely promoted the CGDN application within the local community, and had allowed all community members the opportunity to join the applicant group.

### ***4.9.2 Implemented***

auDA altered the proposed management group requirements, stating that:

*“Although geographic domain names are intended to be allocated for community-based, non-commercial use, the registrant does not necessarily have to be a non-profit community organisation. The registrant might be a company or individual acting on behalf of the community. The main consideration is*

*whether there is a sufficient degree of community control over the registrant.”*  
(.au Domain Administration, 2002b)

This change was made to allow cBallarat to act as the management group for one of the test cases.

Ballarat was the least successful of the three CGDN Projects (test cases), with low community participation and support. Community feedback suggested this may be due to prior failed ICT initiatives in the community. cBallarat’s close relationship to the local council was also cited as problematic for community members.

**Issue 5: CGDN Policy modifications**

Modifications were made to the CGDN Policy to allow Ballarat to become a test case. These modifications resulted in a Community Website Group that did not adequately involve the community.

## **4.10 Fourth-Level Domains**

### ***4.10.1 Proposed***

No restrictions were placed on the use of fourth-level domains (sub-domains) (e.g. *sport.wollongong.nsw.au*) in the original proposal.

### ***4.10.2 Implemented***

The auCD General Manager initially planned to restrict the creation and use of all sub-domains, however due to a strong negative reaction from test case members, the final CGDN Scheme allows community groups to create sub-domains for their own use.

The final CGDN Policy (Section 3(d)) states that that “The registrant must not create sub-domains within the CGDN for the purpose of issuing them to third parties” (.au Domain Administration, 2006c). Community Website Groups are permitted to create sub-domains for their own use, however they are not permitted to allow entities outside the Community Website Group to control a sub-domain. Income from the leasing of



these sub-domains had been included in the financial plans of two of the test cases. These changes forced test case Community Website Groups to alter their plans (including financial plans).

The auCD General Manager stated this restriction was included because auCD would lose control of the content on these sub-domains if community groups were permitted to lease them to other individuals or groups within the community, and because “Community Website Group Registrants are not accredited to provide service guarantees and technical warranties that ensure the integrity of that domain space and the infrastructure and maintenance for the database of domain names” (Parkinson, 2006c). Test case members believed that this explanation for these restrictions was unsatisfactory, because such restrictions had never been enforced for other domain name spaces and were not auDA or auCD’s responsibility.

**Issue 5: *CGDN Policy modifications***

Modifications to the CGDN Policy limiting the use of fourth-level domains had a negative impact on the test cases’ financial plans.

**Issue 6: *auDA procedures***

Modifications to the CGDN Policy limiting the use of fourth-level domains were not conducted in accordance with auDA procedure, with no public consultation occurring. It is likely that, if challenged, the CGDN Policy would not be considered binding.

## **4.11 State and National Websites**

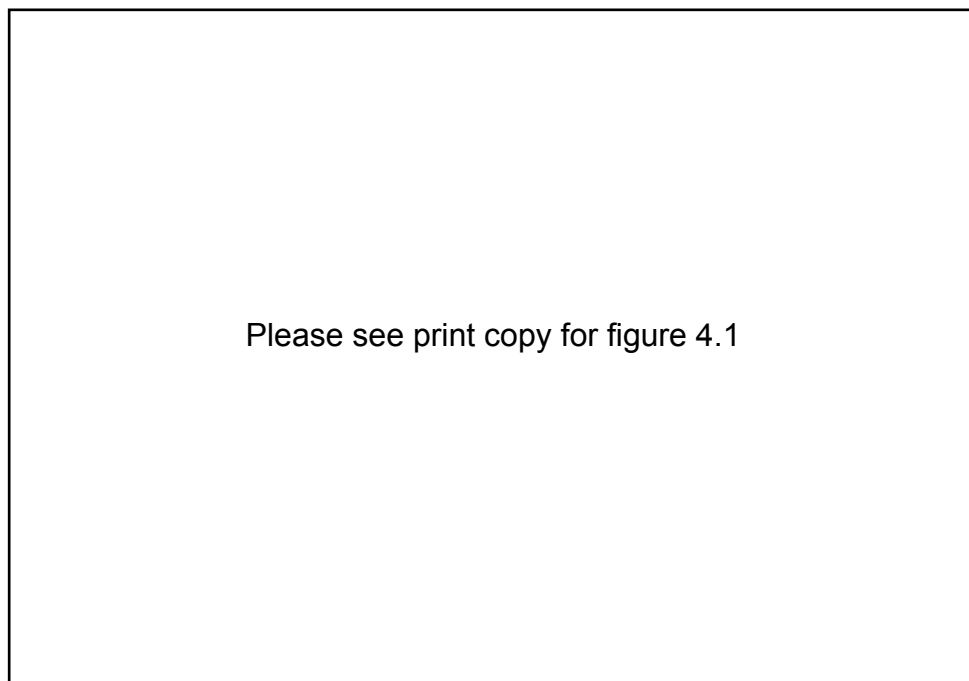
### ***4.11.1 Proposed***

The original OCOS Model proposed that state/territory websites be established to provide a central access point for all prospective and ongoing CGDNs. This central access point would be used to disseminate information about CGDNs to local communities across Australia and provide access to customizable materials and resources for promoting CGDNs in local communities. A national website was also suggested by test case community members. The national website was envisioned as an

interactive map of Australia with users able to click on different states or territories to access the state/territory level websites.

#### ***4.11.2 Implemented***

No state/territory or national websites have been developed or implemented, and none are planned. The auCD website is the only location where a comprehensive list of existing CGDNs can be found (using the 'More community sites' link, see Figure 4.1). This list has not been publicised.



*Figure 4.1: auCD Website*

Community Website Groups must individually promote their community website, rather than relying on promotion of the CGDN Scheme. This requires communities to use their own limited resources and duplicate the activities of other communities, rather than auCD using funds allocated for the CGDN Scheme to develop a coordinated solution.

**Issue 2: Coordinated support for Community Website Groups**

Coordinated national publicity for the CGDN Scheme or active CGDN websites was not provided by auCD, or any other managing body.

## **4.12 Sale of Geographic com.au and net.au Domains**

### ***4.12.1 Proposed***

auDA supported the CGDN proposal “in order to preserve Australian geographic names for use by the relevant community” (auDA National Reference Group, 2003). The CGDN scheme was necessary because the registration of ‘.com.au’ and ‘.net.au’ domain names that used geographic locations was prohibited by auDA. Community feedback gathered during the development of the One City One Site model determined that community members did not support the release of geographic com.au and net.au domains, suggesting it would be too confusing to have both CGDNs and commercial names released at a similar time.

### ***4.12.2 Implemented***

The concept of selling geographic names in the com.au and net.au name spaces was discussed when approving a trial of the CGDN Scheme and Policy. In 2002, the Geographic Names Board recommended that the restrictions on geographic com.au and net.au domain names remain unchanged (.au Domain Administration, 2002b), while the auDA Panel were in favour of removing the restrictions (.au Domain Administration, 2002b). Despite promoting the CGDNs as valuable because they provided exclusive access to Australian domain names linked to geographic locations, auDA stated that “once a system for community use of geographic domain names is implemented, there is no longer good reason to maintain the restriction on the use of geographic names in com.au and net.au.” (auDA New Names Advisory Panel, 2002) The issue was again raised in 2003, with the New Names Advisory Panel failing to make a recommendation (auDA New Names Advisory Panel, 2003).

Feedback from members of the Bathurst and Wollongong Community Website Groups opposing the removal of the restrictions was submitted through auDA's public consultation on the sale of these domains. The Intergovernmental Committee for Geographical Names in Australasia also encouraged auDA to maintain the restrictions (Committee for Geographical Names in Australasia, 2006).

Despite numerous submissions from members of the public supporting the restrictions, and auDA's previous position that the sale of geographic names in com.au and net.au would not be considered until after the release of the CGDNs (auDA New Names Advisory Panel, 2002), auDA chose to lift the restrictions on the use of geographic names in com.au and net.au. These names were sold in 2005 at premium prices, prior to the release of the CGDNs.

Initially, auDA stated that all funds raised from the sale of these domains would be used to support the CGDNs. However, after the sale, the auCD General Manager experienced difficulty obtaining access to this money.

The sale of geographic domains in the com.au and net.au name spaces impacted negatively on both the morale of the test case community members and the value of the CGDNs.

The sale of these geographic names in com.au and net.au decreased the uniqueness (and hence, some of the inherent value) of the CGDNs. CGDNs were initially created because the geographic domains in com.au and net.au name spaces were not available, and they were promoted as providing exclusive access to Australian geographic domain names. The release of geographic names in com.au and net.au can be seen as defeating the purpose of creating CGDNs, and undermining the viability of the CGDN Scheme.

Community Website Group members were angry that auDA had chosen to ignore other funding concepts proposed by community members and OCOS staff, instead justifying the sale of geographic names in com.au and net.au by claiming the income was essential to fund the CGDNs. auDA resources were diverted from the establishment and promotion of CGDNs to the sale of geographic names in com.au and net.au for many

months, causing delays to the national launch of the CGDN Scheme. The negative impacts of this situation were experienced by all three test cases.

The implications of releasing the geographic names in com.au and net.au are significant for future Community Website Groups wishing to apply for a CGDN as they are likely to share the same concerns as the test cases. This in turn may lead to a much lower level of uptake and could potentially lead to the failure of the CGDN Scheme.

**Issue 7: *Geographic domain policy modifications (com.au, net.au)***

auDA approved policy modifications to allow the sale of geographic names in com.au and net.au. This angered community members and removed a unique characteristic of the CGDNs.

## **4.13 National Promotion**

### ***4.13.1 Proposed***

The proposal, with support from auDA (auDA National Reference Group, 2003), acknowledged the importance of ensuring public awareness of the CGDNs and implementing them in a way that maximised their public appeal. A national marketing campaign was integral to this plan. Recommendations from the University of Wollongong included the use of a variety of means, including public meetings, media releases and personal communication with key stakeholders, over the long-term to ensure strong awareness of CGDNs in local communities (ETHOS, 2004).

### ***4.13.2 Implemented***

Despite plans for an extensive national promotion campaign to coincide with the national CGDN launch, this did not occur. A one-week ‘travelling road show’ was undertaken, however this was not supported by a marketing campaign.

**Issue 2: *Coordinated support for Community Website Groups***

Test case members were concerned that the success of their CGDN websites was closely tied to the success of the CGDN Scheme generally. Without a coordinated

marketing campaign by auCD, it is unlikely that these CGDNs will achieve a high level of awareness and use. This awareness is essential for the community websites developed under the CGDN Scheme to become widely used.

## **4.14 Sponsorship**

### ***4.14.1 Proposed***

The CGDN Scheme was designed to support and enhance local communities, with each website management group working with local businesses and community groups to maximise the benefits for all involved, and keeping these benefits within the local community. The OCOS Management Authorities would assist community groups to establish relationships with local organisations, and website content was to be limited to local information and advertising.

### ***4.14.2 Implemented***

A national sponsorship deal was signed to provide financial support for auCD, as the national CGDN management body. This national approach was in direct contrast to the ‘local community’ focus used as the basis for developing the CGDN Scheme and Policy.

Members of all test case Community Website Groups had joined their local CGDN Project on the basis that it was a *local* project – all content was to be local, for local people, with the benefits going to the local community. Community Website Group members were disappointed and angered by the arrangement with a national sponsor, and the resources invested in signing this sponsor. They believed these resources should have been used to promote the CGDN Scheme, thereby assisting each community to gain local sponsors. Community members believed that the choice of a national sponsor was against the grassroots philosophy that had been the initial principle of the CGDN Scheme and Policy.

#### **Issue 8: *auCD’s actions contradict CGDN philosophy***

auCD’s decision to use a national sponsor was in direct contrast to the *local* focus

originally proposed by OCOS and supported by auDA.
--

## **4.15 Licensing Costs**

### ***4.15.1 Proposed***

The OCOS proposal did not recommend a specific price for the sale of each CGDN, however the CGDN Scheme was designed to minimise the costs for Community Website Groups due to their compulsory non-profit status.

### ***4.15.2 Implemented***

At the time of launch, the cost of licensing a CGDN for 2 years was \$550 (.au Community Domains Trust, 2006e). Prior to launch, auCD has received community feedback that this licence fee was too high, and genuine, start-up, non-profit organisations would not be able to afford it. However, auCD ignored this advice. Three months later, the cost fell to approximately \$99 for a 2 year licence (.au Community Domains Trust, 2006f) due to the low uptake of CGDNs.

<b>Issue 8: <i>auCD's actions contradict CGDN philosophy</i></b>
--

The initial pricing of CGDN licences demonstrated a lack of concern for genuine, start-up, non-profit organisations.
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## **4.16 Launch Delays**

### ***4.16.1 Proposed***

Upon formation of the test cases, auDA stated that the test case domain names (such as wollongong.nsw.au) would be available in mid-2004, with a public launch in late 2004.

### ***4.16.2 Implemented***

Due to extensive delays in the development, distribution and assessment of the test case reports, and the establishment of the name spaces, the three test cases did not receive access to their CGDNs until early 2006. The public launch occurred in August 2006.

auCD's policy, technical and administrative issues delayed the launch of the test case websites for almost two years. Test case Community Website Group members expressed frustration at the situation – they believed that auDA and auCD were unwilling to listen to the experiences and knowledge of the communities, thereby extending the delays as auCD management repeated research, plans and development already conducted by the test case communities. Members left all three Community Website Groups during this period of delays because of the inaction.

**Issue 3: *Organisational issues within & between auDA & auCD***

Delays caused by auDA and auCD forced the test case Community Website Groups to wait two years for access to their CGDNs. This resulted in increased financial pressure and a decrease in active community participation.

#### **4.17 Reporting**

Seven reports were produced by the ETHOS laboratory for auDA. The role of ETHOS was to provide an independent review and evaluation of the One City One Site (OCOS) pilot project and report the findings of the review and evaluation to auDA (ETHOS, 2004). These reports provided a detailed commentary on the process of establishing and managing a community website using a Community Geographic Domain Name convention. They combined data from the three test cases, addressing issues relating to community consultation, the Domain Name Application, website planning and development, feedback from local communities, the idea of state and national websites, the CGDN Model, and long-term viability.

#### **4.18 State and National Websites**

The original CGDN model proposed by OCOS recommended the all CGDNs would be accessible through national- and state/territory-level websites, using a logical naming structure (eg: [www.nsw.au](http://www.nsw.au) for the NSW state level). The national-level website was envisioned to resemble an interactive map of Australia, with users being able to click on different states or territories to access the state/territory-level websites. A state/territory-



level website was identified as a highly valued resource to all of the following stakeholders:

- local communities applying for a Community Geographic Domain Name (CGDN),
- assessors involved in assessing the Domain Name Applications,
- interested individuals/groups looking for and accessing CGDN community websites, and
- CGDN policy regulatory bodies such as auDA.

#### **4.19 Value of Evaluating the CGDN Scheme**

It is probable that the requirement for community groups to demonstrate that they are representative and inclusive of their community before being given ownership of a CGDN (auDA National Reference Group, 2004) would place a heavy burden on the group at an early stage, because it involves activities such as community consultation and publicity, both of which require funding. After the community group formally establishes a community website, a range of issues including finance, content, day-to-day management, and the ability to connect with the broader community must be addressed. Previous studies have identified these issues as critical to the viability of community websites and their associated communities (see Section 2.4.4). However, many of these previous studies have been limited to a single community group, or have focused on community websites that will receive on-going external funding. The trial and implementation of the CGDN Scheme provides an opportunity to evaluate a government-drive, structured community website scheme, and compare the experiences and successes of multiple communities. It should be noted that, while initial plans for the CGDN Scheme included the *standardisation* of community domains (and to a limited extent, community websites), in practice it is highly unlikely that such standardisation will be achieved because of the organic nature of communities.

#### **4.20 Reflection**

As initially conceived, the CGDN Scheme and Policy presented an opportunity for communities to control a domain name that represented their geographic location. There was broad community interest and a high level of excitement about the CGDN Scheme

from individuals and existing community groups across Australia when initially proposed. While this high level of widespread community enthusiasm was not maintained until the national launch of the CGDN Scheme, wide acceptance of the idea was maintained. The community's acceptance and support of the concept were conditional on the Scheme being managed by the right people, and only allowing true 'communities' to have access to the CGDNs. The greatest challenge in converting community enthusiasm to active community websites was finding people within each community with the time and energy to invest in the community website.

Inherent in the Scheme's conception was the need for communities to demonstrate their right to one of these domains. This insistence on a high level of preparedness created significant burdens on participating communities, which were compounded by the lack of absence of financial support in the Scheme. Despite a community-focus on policy development in the early stages, features included in the final CGDN Policy threatened the community focus of the CGDN Scheme.

auDA's decision to appoint an auCD Manager with no experience in community engagement or community projects led to significant problems across the CGDN Scheme. Changes implemented by this auCD Manager reduced benefits to communities. Resources which had been intended for free or low-cost distribution to participating communities were advertised for sale at high prices. Policy modifications allowed groups which were not representative of their respective community to gain control of a CGDN. Communication between the auCD Manager and community participants was minimal, with community feedback largely ignored by auCD. Many of the changes made by the auCD Manager appear to have been implemented from a financial perspective. auCD was concerned with being a financially responsible (and ultimately, successful) organisation. In an attempt to achieve this goal, service to the community was sacrificed. The ease with which changes were made to the CGDN Scheme and Policy highlight the need for openness and accountability of those with this power, and demonstrate how apparently minor changes can alter the focus of an entire scheme.

While from a practical perspective, the need for auCD to be financially successful can be understood, we must be concerned about the manner in which auCD chose to do so.

Rather than reducing administrative expenditure (which constituted a significant portion of overall costs), services to the community (which were auCD's main goal) were minimised. This was especially disappointing because financial plans for a CGDN managing body had been developed as part of the OCOS trial implementation. These OCOS plans included a comprehensive marketing and staffing plan (including multiple people who had experience with community engagement projects) that allowed the provision of basic resourcing to communities at low cost, and were concerned with developing a critical mass of community websites so that on-going promotion costs would be minimal.

By late 2007, the slow uptake of CGDNs had been noted by auCD. The cost of resources to participating communities was reduced, and uptake increased, supporting the assessment above that the cost of resources (or the costs and skills required to develop such resources) was a significant factor stopping communities from participating in the CGDN Scheme. One of the low-cost resources now available from auCD is a website management tool, which minimises the need for access to technical skills when developing the community website. This is the only technical support available from auCD. This reversion to the earlier principles of the CGDN Scheme appears to have been quite effective, with 36 community groups actively participating through CGDN community websites and another 13 CGDN applications in process by February 2008. The provision of a range of technology recommendations, and pre-negotiated pricing with vendors for CGDN community groups, would further assist communities and would minimise issues associated with technology selection.

The issues identified and discussed in this chapter lead us to consider whether the insistence on planning assists communities to implement community websites with a greater likelihood of success. It also begs the question – what happens when communities attempt to develop community websites as part of tightly structured schemes without initial funding? These questions will be considered throughout **Chapters 4-7** of this thesis, and the findings will be compared in **Chapter 8**.

## 4.21 Conclusion

This chapter has described the development of the CGDN Policy, and the implications of the associated changes on the implementation of the CGDN Scheme. In conjunction with related discussion throughout the thesis, this chapter has addressed *research goal i*. The changes made to the CGDN Policy have had significant and predominantly negative impacts on the experiences and plans of the test case communities. A detailed discussion of these impacts on the test case communities will be presented in **Chapters 5-7. Chapter 8** will present a brief overview of the early experiences of communities attempting to establish a CGDN website after the national launch, and will consider the impacts of the CGDN Policy on the experiences of these communities.

## **Chapter 5: CGDN Project 1 – Wollongong**

### **5.1 Introduction**

Wollongong is a regional city located 1.5 hours south of Sydney. The city has a population of 192,402 spread over 714 square kilometres (Wollongong City Council, 2006). The city's main industries are manufacturing, retail and education (Wollongong City Council, 2004b).

The Wollongong community was first introduced to the Community Geographic Domain Name (CGDN) scheme in early 2004. Facilitated and managed by the ETHOS research group at the University of Wollongong, the test case succeeded in involving a diverse group of local residents.

This chapter describes the facilitation arrangements for the Wollongong case study, and the resulting Community Website Group and website. The process used to inform and involve the community, and to develop a CGDN Management Committee, is discussed, followed by an explanation of the legal arrangements used to satisfy the CGDN Policy. A brief discussion of the documentation, website planning, and web development for the website is also provided. The chapter concludes with a description of the website launch and post-launch experiences.

### **5.2 Facilitation**

Responsibility for initiation and facilitation of the Wollongong case study was assumed by Enterprise Technologies and Human Oriented Systems (ETHOS), a research group at the University of Wollongong. The project was led by 3 members of the ETHOS group, who were permitted to facilitate the case study during work time. These researchers facilitated the community's application for a CGDN by actively collecting information about the community website scheme, promoting the concept, and organising and facilitating the meetings. As part of the university's Community Engagement Scheme (University of Wollongong, 2006), the university provided resources to support the establishment of the Wollongong Community Website (WCW)

group, including staff to contact local organisations and funding to pay for the hire of meeting venues and incidentals.

**Issue 9: *Effective facilitator***

A committed facilitator is required to successfully build a Community Website Group, apply for a CGDN and develop a CGDN website. This facilitator requires knowledge of the community, links with key community members, and significant time to devote to the project. It is unlikely that the Wollongong facilitators would have committed to the project if they were not being paid by the University of Wollongong to do so.

Upon formal establishment of WCW and the election of a Management Committee, the facilitators reduced their role and encouraged the Management Committee to assume full responsibility for the running of WCW. The facilitators continued to support the group by arranging access to resources such as meeting rooms, computer equipment and skilled workers, and by managing the Yahoo! online discussion group.

**Issue 10: *Committed Management Committee members***

Once the Management Committee assumes responsibility for the CGDN Project, commitment from these Management Committee members is required to successfully build a Community Website Group, apply for a CGDN and develop a CGDN website. Management Committee members require knowledge of the community, links with key community members, and significant time to devote to the project.

## **5.3 Introducing wollongong.nsw.au to the Community**

### **5.3.1 *Informing & engaging the Community***

The CGDN Policy mandates that a Community Website Group established to manage a website under the CGDN Scheme must “represent a broad range of community interests and groups. Groups may include, but are not limited to: special community sector interest groups, sporting clubs and groups, hobby groups and clubs, tourism, business, historical clubs/societies, education, charities, not-for-profits, media, arts, culture, entertainment, spirituality/religious, aboriginal, multicultural, women, men, seniors,

youth, parents, etc.” (auDA National Reference Group, 2004). To ensure this broad level of representation, the Wollongong facilitators consulted with a variety of community and other organisations in the local area to encourage participation from all sectors in the community.

Letters providing information about the new Wollongong CGDN were mailed to over 100 local community groups and organisations during March and April 2004. Each organisation received a follow-up telephone call during April to discuss the project and encourage a member of the organisation to attend one of the community meetings. Most feedback received from these telephone calls indicated that the community groups supported the idea and would like to be represented on the website. However, workers indicated that they were already lacking time and resources, and were unable to directly contribute to the initial development of the website.

The wider community was informed about the proposed new community website and meetings, through the media between February and May 2004, to ensure thorough community consultation. Media sources used included local newspapers (multiple articles), major local newspaper (multiple articles), multiple radio stations (interviews) and television news broadcasts (feature stories). These media contacts were designed to start the consultation process and create community awareness. The group’s ability to gain access to the media was enhanced by the support provided by the University of Wollongong Media Unit, which used established contacts to disseminate media releases and arrange interviews.

The facilitators also established an initial, basic website to provide information to the community. This included general information about the project, the CGDN Policy, meeting dates and contact information, and Frequently Asked Questions (FAQs). The majority of attendees at the community meetings indicated that they had heard about them from the media publicity.

The WCW facilitators considered collaboration and partnerships with existing groups in the local community, however no other non-profit technology groups existed in the Wollongong area. Local technology companies were approached about encouraging staff to join WCW. This approach led to three individuals joining the management

committee. The membership of these individuals also allowed WCW to form relationships with established local businesses and business associations.

There was low awareness of the CGDN Project (which includes the Community Website Group, and their attempt to license a CGDN and establish a CGDN website) throughout the Wollongong community because the CGDN Scheme was not adequately promoted by auCD. The Community Website Group was forced to dedicate significant resources to raising community awareness and understanding. The lack of a community website also caused difficulties when explaining issues to the community. This was partly due to the CGDN Scheme being a new concept and only in pilot form, and partly due to a lack of resources dedicated to this task by auDA and auCD. Difficulties are likely to arise for communities unless their facilitator has strong connections with the local media for promotional purposes. See Section 4.7 for further discussion.

**Issue 11: *Local promotion***

Despite significant efforts from the test case facilitators, high awareness of the CGDN Project was not achieved throughout the Wollongong area. This was partly due to a lack of funding to employ staff to contact more local organisations or to pay for advertising.

**Issue 12: *National promotion***

The difficulties of raising awareness of the Wollongong CGDN Project were compounded by auCD's actions. The CGDN managing body's responsibility to promote the CGDN Scheme to all Australian communities was not fulfilled.

The recruitment of volunteers to participate in this test case was conducted through advertisements in local media. It did involve members of the community with experience grounding the project in the community environment. This process of publicly advertising for interested parties reflects issues related to the disconnect between the arbitrary geographic boundaries related to the CGDNs, and was conducted because there was no existing group of individuals or organisations which constituted the 'community' that the CGDN was designed to represent. The recruitment process and



definition of community had an impact on the experiences and outcomes of this test case.

### ***5.3.2 Holding the Initial Meetings***

Prior to directly engaging the public, the facilitators met with the Community Services division of Wollongong City Council to obtain advice on the best ways to engage the local community. Based on this meeting, it was decided to hold two information meetings in the outer suburbs of Wollongong city prior to the major public meeting in the city centre. Factors contributing to this decision included Wollongong's size, distinct population groups, and the fact that the facilitators wanted as much community involvement as possible.

The two initial meetings were held at neighbourhood community centres in late April 2004. The facilitators were advised by Wollongong City Council staff that some areas of Wollongong traditionally had low participation rates in community projects. This was generally attributed to select groups feeling unwelcome, due to race and socio-economic factors. While Wollongong is a culturally, ethnically and economically diverse city, these variations are considered to be closely reflected by the geography of the area. As a result, it was decided to hold one of the meetings in a 'low participation' area in the hope that this would encourage greater participation.

The meeting in the northern suburbs (considered to be higher socio-economic, 'white' middle class) had 11 attendees; the meeting in the southern suburbs (lower socio-economic, 'ethnic' and typically low participation) had only 2 attendees. Both the community members at the southern meeting lived in the northern suburbs, but were unable to attend the northern meeting. Despite commitment to diversity, WCW membership could not be considered representative of the community.

**Issue 13: *Broad community representation***

The economic, social, professional, ethnic and language diversity of Wollongong resulted in difficulty building a Community Website Group that was fully representative of the community. It is likely that similar difficulties engaging with all segments of the community will occur in many communities.

The major community meeting was held on May 4, 2004 at the Wollongong Town Hall in the centre of Wollongong, and attracted 15 people. Although attendance was not as high as expected by the facilitators, “there was a broad cross-section of the community represented, and everyone there seemed committed to making this a reality” (Vrazalic, 2004). Based on attendance at the meeting, it was decided that the project would proceed.

Many individuals and community groups expressed interest in the community website during this early publicity and formation phase of the project. This interest was expressed in three forms:

- Individuals and organisations that wanted to be directly involved in applying for a CGDN and developing a community website and were committed to the process.
- Individuals and organisations that wanted to be a member of the Community Website Group, but did not wish to be actively involved in the above activities.
- Individuals and organisations that did not wish to participate in the above activities, or be a member of the Community Website Group, but wanted to be kept informed about the CGDN application and development, and for future listing purposes on the website.

After the community meeting, the ETHOS facilitators established a website to present information about the proposed Wollongong community website, and contact details for interested community members.

**Issue 14: *Community commitment & contribution***

The Community Website Group had difficulties in identifying and contacting key stakeholders that they felt would be interested in the project. This difficulty may be more pronounced due to the size of both the Wollongong area and its population.

## **5.4 Committing to the Project**

### **5.4.1 *Community Representation***

Feedback from the interested community members at subsequent meetings indicated that the group felt that they were representative of the Wollongong community, despite the lack of participation from some areas of the community, as previously discussed. While the group did not have broad representation from across the community, Wollongong's experience demonstrated that some groups that are traditionally not included in community projects (as identified by Wollongong City Council) have also remained absent from this group, despite the facilitators' efforts to involve them. Members "learnt that, while it is important to welcome and provide opportunity to all members of the community, it is not always possible to obtain a completely representative group. This is especially true when the population is as ethnically and socio-economically diverse as in Wollongong." (ETHOS, 2004). Based on members' agreement that full community involvement had been sought and that the group was largely representative of the wider community, the members committed towards forming a Community Website Group to apply for the Wollongong CGDN.

The process of building and maintaining a cohesive and representative Community Website Group was fraught with challenges.

**Issue 13: *Broad community representation***

The lack of participation from some segments of the community meant it was not possible to build a truly representative group that allowed all community segments to participate in ownership of the CGDN.

**Issue 15: *Mechanisms for maximising community involvement***

Arranging meeting times and locations that suited all (or most) of the interested parties was difficult. The facilitators were continually negotiating convenient meetings times with interested parties to maximise community involvement and positive experiences.

**Issue 16: *Financial investment from the community***

Preferred meeting locations were expensive. Support and financial investment from the community were sought.

**Issue 11: *Local promotion***

Once established, the facilitators had to actively work to maintain community awareness and support while the Community Website Group was applying for ownership of the CGDN and developing the website.

**Issue 17: *Communication mechanisms***

Once contact was established, the facilitators had to actively facilitate communication between interested parties.

Over time, the level of community interest increased. This was mainly as a result of word-of-mouth communication, and the website that was set up by the facilitators. This interest was manifested in the increasing number of members, as well as e-mails and phone calls from individuals and organisations interested in the project. The website set up to raise community awareness was extended during July 2004 to consult with the local community, demonstrate what a CGDN website could look like and provide information about upcoming events, such as meetings. Invitations were extended to all local community members to participate. This approach allowed interested individuals and organisations to gain an insight into the potential of a community website.

Key stakeholders were contacted personally to invite them to attend a meeting. These stakeholders included the Lord Mayor, local councillors, state minister, and the director of the Illawarra Business Chamber. There was a mixed response. While the existing members had initially hoped that these stakeholders would become members, they were pleased that some individuals publicly supported the concept and encouraged the community to join the Community Website Group.

After the initial media drive and community consultation phase, the group decided to limit further promotion until they owned the domain name and had something for the community to view and engage with. In September 2004, a competition to design the look and feel of the website was launched. The purpose of the competition was to encourage the community to become involved, to raise awareness of the project, and to allow the public to 'own' the website. Despite wide publicity, only one entry was received. Wollongong City Council staff suggested that this lack of participation and interest was typical of the Wollongong community. The winner of the competition, a local school child, was presented with his award at Viva la Gong, which is Wollongong's annual community cultural festival. This provided further community awareness of the website.

#### ***5.4.2 Internal Communication***

The facilitators found that one of the greatest challenges was maintaining commitment from interested community members. This was largely attributed to the amount of paper work required to apply for the CGDN, **prior** to developing the actual community website. The individuals and organisational representatives who wanted to be directly involved in applying for a CGDN and developing the community website joined a free Yahoo! group and mailing list, which was used to exchange messages and announce meetings. This mailing list allowed open communication between the members, which would have otherwise been difficult because they did not know each other.

The Yahoo! Group also allowed group members to upload relevant files and documents, and store information. These features were used heavily when the group was completing the necessary paper work for the CGDN application.

### ***5.4.3 OCOS Reporting***

Facilitators of the Wollongong test case maintained regular contact with the OCOS Project Manager. The facilitators participated in the regular test case teleconferences held with other test cases and completed the required weekly reports (see Weekly Report Template). Email and telephone contact was common. The facilitators relayed information from the OCOS Project Manager to Community Website Group members. The OCOS Project Manager was also a member of the Wollongong Yahoo! discussion group and responded to Community Website Group members' questions when appropriate.

### ***5.4.4 Meetings***

One of the major challenges in engaging the community was arranging a meeting location that was convenient for the wider community. Early meetings were held in public buildings (neighbourhood centres, town hall, local council building), however this became very expensive for the facilitators, and it was often difficult to book the public venues at the required times. As a result, the meetings were moved to the University of Wollongong campus. While some people felt that this was a difficult location to find, members who attended meetings at the university indicated that the facilities and convenience were much better than in the public buildings. Facilitators supplied maps and directions to minimise the confusion for attendees.

Most of the individuals who committed to the project were also heavily involved in other community groups and activities, and were therefore very busy. Arranging meeting times was difficult, with meeting dates negotiated up to 4 weeks in advance to ensure maximum attendance. The voluntary nature of this project required the facilitators to accommodate the needs of as many community members as possible.

### ***5.4.5 Resources***

In the early stages of publicity and planning, a range of resources was required and a large amount of time spent by the facilitators. Financial resources, meeting spaces and communication systems were provided by the University of Wollongong. Without this type of support from existing organisations within the community, the process of

informing any community about the scheme and holding initial meetings would be costly for the facilitators.

**Issue 18: *Viable level of funding***

The lack of financial resources at the outset meant that the Community Website Group could not afford to pay for advertising, meeting locations or even tea and coffee for meetings. The facilitators must work to minimise costs at all times. Gaining access to financial and in-kind resources early in the process was challenging, however this situation may have been exacerbated by the lack of community awareness because this was a test case. Hopefully communities undertaking CGDN Projects in the future will be assisted by greater awareness of the CGDN Scheme.

**Issue 16: *Financial investment from the community***

Wollongong does not commonly experience high investment from the community or investment from benefactors.

**Issue 19: *Competition for available funds***

Competition for available funds is high among existing community groups.

One idea proposed by OCOS and supported by WCW was a state website, which would act as a single repository of all the information and resources a Community Website Group would need to apply for and set up a website. Resources that WCW identified as potentially helpful included a sample completed Domain Name Application, a 'How To Kit' with resources and templates (e.g. for publicity, legal requirements), links to existing CGDN Projects and to related bodies such as funding organisations, CGDN Policy, and the stories of other Community Website Groups.

It was realised that local government, community and educational organisations should be approached in an attempt to obtain donations of such resources. Access to these resources at a local level is imperative if the Community Website Group and the community website are to generate interest in the community. Without these resources,

it would not be possible to undertake a CGDN application process. In addition, it is important that Community Website Groups have a facilitator who is willing to take ownership of the process in the early stages to drive change and assume responsibility for the management of the application process.

The Office of Information and Communication Technology (OICT) (a government body) granted each of the New South Wales-based test cases (Wollongong and Bathurst) \$10,000 to assist in the funding of the test case. The Wollongong Community Website Group spent this money on insurance, hosting and website development. This large injection of funds into the Community Website Group allowed progress to be made much more quickly than if the members had been required to conduct fundraising or complete the tasks themselves.

## **5.5 Community Website Group**

The Community Website Group, legally called ‘Wollongong Community Website’, encompassed individuals from a range of backgrounds who were residents of the geographic area of Wollongong. From among the general members of the Community Website Group, a Management Committee was elected to assume management responsibility for the Community Website Group.

### ***5.5.1 Management Committee***

The Wollongong Community Website Group Management Committee found that to successfully form a legal entity, complete the CGDN application process and design a community website, a range of skills was required. The Community Website Group members (Guillaume, 2004b; Savage, 2004a; Savage, 2004b; Smith, 2004c; Hyland, 2005) highlighted that their group needed access to the following skills in the short term for the purposes of establishing their entity and setting up a website:

- Planning skills
- Website design skills
- Technical skills
- Organisational abilities
- Legal expertise



- Business and marketing skills
- Accounting expertise
- Management abilities
- Negotiation skills

For reasons of convenience and cost, these skills should be held by members of the Community Website Group, rather than having to seek advice from members of the wider community. Preferably, the majority of these skills should be available within the Community Website Group Management Committee.

Members of the Wollongong Community Website Group (Guillaume, 2004a; Smith, 2004b) stated early on that it was extremely useful to have individuals with strong links to existing community and government organisations, as well as local knowledge and contacts in the local media. The individuals with strong community ties were able to identify key stakeholders, introduce new individuals to the group and promote the CGDN Project widely.

The active involvement of the members, through the use of their skills, gives them a sense of ownership over the entire process and increases the probability of success, because they have invested in the website and are more likely to remain committed to it in the long term. If Community Website Group members take on dynamic and ongoing roles in the first 12 months, they are more likely to retain a certain level of momentum and less likely to abandon the Community Website Group. However, it is essential that the burden on each individual is not too great. After the elections, Wollongong's facilitators attempted to hand over control to the new executive. Due to a combination of personal circumstances and excessive demands from WCW, both the President and Vice President of the organisation resigned within 9 months. Feedback from these two members indicated that the large amount of documentation they were required to complete was a factor in their resignations.

**Issue 20: *Skilled Community Website Group members***

The members of the Community Website Group must have a range of skills to successfully complete the CGDN application process. Broad membership should therefore be encouraged from the local community. Finding individuals with adequate skills may be a problem in small communities located in remote areas as there may not be enough local residents with the required abilities and expertise, and they may also be geographically dispersed.

**Issue 21: *Excessive documentation requirements***

The extensive nature of the documentation, and the volunteer capacity of all other people involved, meant that the facilitator played a significant role in the completion of the documentation. The facilitator's role in completing this documentation is likely to be reduced in future application, due to the consolidated version of the CGDN application to be completed by non-test case communities.

A Community Website Group requires numerous members with strong leadership skills and a high degree of organisation. The Wollongong test case clearly demonstrated the need for a champion or leader to drive and co-ordinate the CGDN application process. At times the group suffered from a lack of clear leadership, resulting in duplication of efforts and lack of effective co-ordination.

**5.5.2 *General Members***

The members of the Wollongong Community Website Group had a large selection of skills, and some were already involved in other community-based website projects before joining. Members of the Wollongong Community Website Group had experience in the following roles:

- Accountants
- Arts, Events and Entertainment workers
- Business operators
- Community website managers
- Council and Government representatives

- Education providers
- Established community group members
- ICT community workers
- Sporting association participants and organisers
- Telecommunication providers
- Web developers

While not essential, the variety of interests and contacts allowed the Community Website Group to access many segments of the community, and solicit donations, support and information from numerous organisations.

### ***5.5.3 Geographical Scope of Membership***

Before formalising the Wollongong Community Website Group, the boundaries of membership had to be defined. Defining the boundaries of membership was a significant challenge for the Community Website Group and generated much discussion. Based on the CGDN Policy, the Wollongong.nsw.au domain name technically referred to the suburb of Wollongong as defined by the NSW Geographical Names Board. This definition of Wollongong includes only the Central Business District and a limited residential population (13,797 people in the ABS 2001 Census (Wollongong City Council, 2004a)). This definition was deemed unsatisfactory for membership, because it was too limiting and excluded large portions of the community who would consider themselves to be residents of Wollongong because they lived in the City of Wollongong. The City of Wollongong has a population of 192,402 and covers 714 square kilometres (Wollongong City Council, 2006). All Community Website Group members agreed that the website should represent the whole of the City of Wollongong.

Discussions clearly indicated that the Community Website Group members did not define the community's boundaries in the same way that the geographical boundaries are defined by the NSW Geographical Names Board. This problem is likely to be common for all suburb names that also happen to be town or city names. Once the Community Website Group decided to extend membership beyond the Central Business District of Wollongong, there was extensive discussion about the appropriate outer

boundaries for membership. The issue was further confused by the varied definitions of the City of Wollongong supplied by local and state government authorities, and tourism organisations. Due to varied definitions of 'Wollongong', the members of Community Website Group had difficulty limiting the exact area of Wollongong for membership purposes. Residents of the area did not necessarily define themselves in the same way as the written boundaries. To resolve the issue, a list of postcodes was selected to cover the Wollongong region, and consisted of adjoining suburbs stretching from Helensburgh in the north to Albion Park Rail in the south. Membership of the Community Website Group is open to people who live or work in the area defined by the Community Website Group as 'Wollongong'. Both individuals and organisational representatives can become members, with each member having an equal vote and paying identical membership fees.

**Issue 22: *Shared goals & objectives***

It was essential to agree on a definition of 'Wollongong' to ensure all Community Website Group members understood the boundaries of the CGDN website.

## **5.6 Formation of Legal Entity**

The establishment of a not-for-profit legal entity is a pre-requisite for applying for a CGDN (.au Domain Administration, 2006c). This legal entity can then apply for, own, develop and manage the CGDN and associated website. A representative from the Office of Fair Trading attended the major community meeting to explain the three options for the legal entity as specified by the auDA policy guidelines. The group considered all three entity types: incorporated association, co-operative and company limited by guarantee. Some members preferred the company option, because it gave the group greater scope for trading. However, the legal and reporting requirements of the company were considered to be too great for the group to meet, considering all members were volunteers. The Office of Fair Trading also explained that if the group chose to form an incorporated association, there was a clear path to move to a co-operative or a company at a later stage. Based on the information provided by the Office of Fair Trading representative, members of the community who were interested in participating and forming a legal entity (i.e. the Community Website Group) were able to make a decision about how to proceed.

The group chose to form an incorporated association under the NSW Department of Fair Trading Act. On May 20, 2004, the group was incorporated under the legal name ‘Wollongong Community Website Inc.’ (WCW). Interviews with WCW members revealed that many felt that an incorporated association was “the only way to go because it was so much easier to set up” (Hyland, 2004) than the other types of legal entities available.

Association Rules must legally be established before forming a new incorporated association (NSW Office of Fair Trading, 2004). The standard Model Rules (available from the NSW Office of Fair Trading) may be used, or associations may choose to develop their own Association Rules. The standard Model Rules were used as the basis of WCW’s Association Rules, with changes made to suit WCW’s specific needs. For example, the rules were modified to allow membership to local organisations, and not just individuals. The Bathurst and Wollongong test cases pooled their resources during this process (through the facilitators) which streamlined the process, and many of the changes that WCW made to the standard Model Rules were based on the Bathurst Community Website Association Rules. The Bathurst Community Website group had also opted to form an Incorporated Association and were working through the same process. The two Community Website Groups also shared various other documents including the membership application form, the proxy voting form and a FAQs sheet for new members.

**Issue 24: Governance policies**

Appropriate templates for association rules were developed for local communities by ETHOS, with the purpose of being made freely available to all communities completing this process. However, the differences between states, in terms of the legal entities which are allowed, argues strongly for the provision of some different resources on a state-by-state basis, in addition to the common resources.

A WCW Management Committee was established, with all positions filled. The Management Committee consisted of 7 members:

- President
- Vice-president

- Sectary
- Treasurer
- 3 general members.

WCW established three sub-committees, responsible for various aspects of association management and website implementation. These sub-committees were:

- Finance & Marketing
- Community Outreach
- Web

The formation of the legal entity raised issues with regard to funding, with the cost of forming an incorporated association being approximately \$130. Until this time, all resources had been supplied by the University of Wollongong, with this cost being the first covered by the community. The Community Website Group decided to cover the cost using an annual membership fee. However, this raised a somewhat paradoxical situation because the fee could not be levied until the entity was legally formed. This problem highlighted the need for seed funding from an existing organisation to support the formation of the legal entity.

The facilitator, informal Community Website Group and then WCW experienced difficulty funding the setup activities because they did not have seed funding. Despite contacting numerous community groups, the lack of community awareness of the CGDN Scheme and of this particular CGDN Project made it difficult to obtain support.

**Issue 18: *Viable level of funding***

WCW's lack of funding was attributed to ineffective publicity at both local and national levels, and this lack of funding limited WCW's ability to promote the CGDN Project.

Wollongong City Council offered WCW a \$1000 donation soon after their formation. However, the donation could not be taken up until the Community Website Group provided evidence of having public liability insurance. Incorporated associations are not legally required to have public liability insurance, and several attempts to obtain the

insurance by members of the Wollongong Community Website Group were unsuccessful. Insurance companies were not willing to give the Community Website Group public liability insurance because this type of insurance is traditionally associated with buildings and other tangible assets, or events, neither of which were relevant to the Community Website Group. After significant discussions between WCW and Wollongong City Council, the Council chose to waive the public liability insurance and WCW received the \$1000 donation.

In the Wollongong test case, WCW was the legal entity formed by members of the Community Website Group as part of the CGDN application process. The term 'Community Website Group' will be used to describe the entity in the following discussion, unless differentiation between the **group** and the **legal entity** that corresponds to the group is required.

## **5.7 Membership**

Based on the WCW Association Rules, any individual who lived or worked within the boundaries of Wollongong (as specified by the Association Rules) was eligible for Community Website Group membership. Representatives for organisations located in Wollongong were also permitted membership. After the incorporation of the Community Website Group entity, individuals who had been attending the public meetings became formal members of the Community Website Group by paying a \$3 membership fee (\$1 joining fee (a legal requirement), and \$2 annual membership fee).

After significant publicity, the group of committed members agreed that active membership recruitment should cease until the website was implemented, because "it's difficult to involve people if there is nothing to show them" (Savage, 2005).

### **5.7.1 Business Membership**

The Community Website Group sought to involve the local business community from the outset. During the community consultation process, the Illawarra Business Chamber (IBC) was contacted. While the IBC was supportive of the project in principle, they were unwilling to commit to the project without a clear definition of the role of

business. At the time, planning was still in the early stages and the group were unsure of the direction of the community website. IBC's input into discussions about the business role would have been valuable.

The business community was generally wary of becoming involved in this type of project due to previous negative experiences with similar projects. There have been numerous failed attempts to develop both business and community websites in the Wollongong region over the last few years. One participant commented: "Business has been burnt by other websites, because the developers were in there for a quick buck. We have to prove that we really are doing this for the community" (Maher, 2005).

Business interest in the Wollongong community website still remains relatively low, with the only relationships being with employers of Community Website Group members. Previous negative experiences with projects promoted in a similar way appear to be the main reason for this lack of interest. As a result, the Community Website Group has been unable to raise funds from the business sector.

### ***5.7.2 Community-wide Membership***

Members of the community were generally supportive of the CGDN Project. However, as discussed in Section 5.3.2, Wollongong is known for a lack of participation in community projects. In general, the Community Website Group members were of the belief that broad representation was achievable in the long-term, after the establishment of the community website. Community Website Group members shared the opinion that as more people in the community used the website, there would be more interest amongst local organisations to participate and have a presence on the website. This, in turn, was expected to lead to broader levels of representation. However, Community Website Group members suggested that specific guidelines about what constitutes broad representation would be useful, so they could target certain organisations and individuals.



## 5.8 Moving Forward

The key issue facing the Community Website Group following the formation of the legal entity was the need to maintain momentum. The facilitators were integral to this process, until the Management Committee was formed and many of the facilitator's roles and tasks were transferred to the Management Committee members. The Management Committee for WCW and the Community Website Group were identical. The facilitators organised the first formal meeting of WCW and handled the election of the Management Committee. The facilitators also supported Community Website Group members in the establishment of three sub-committees, responsible for various aspects of association management and website implementation:

- Finance & Marketing (e.g. sponsorships, grants, donations)
- Community Outreach (e.g. awareness raising, partnerships)
- Web (e.g. hosting, website developers, software)

After official formation of the Management Committee, these Committee members assumed responsibility for community consultation. This role was managed by the Community Outreach sub-committee, which continued the community consultation process, encouraging participation and increasing awareness of the CGDN Project.

### **Issue 24: *Community consultation***

The facilitators spent an extensive amount of time investigating and selecting appropriate methods of community consultation. This time could have been reduced if the facilitators had guidelines for the community consultation process.

A 'How To' Kit developed by ETHOS contained such guidelines. This 'How To' Kit was modified by the auCD General Manager, and some content was made available through the auCD website.

Once the Management Committee assumed responsibility for the process, the facilitators shifted from driving the process to supporting the Community Website Group members. Management Committee members identified the most difficult challenge as maintaining momentum with both documentation and website development. While the members were enthusiastic and committed to the community

website, all were volunteers and were unable to devote large amounts of time to completing the documentation and developing the website.

**Issue 25: *Presence of volunteer workers***

Possible solutions that were suggested by members to the high demands on the volunteer workers included: reducing the amount of documentation to be completed, providing assistance with realistic planning, recruiting more members to share the workload, and providing communities with more guidance and practical support for website development.

## **5.9 Domain Name Application**

The Wollongong Domain Name Application (see Domain Name Application) was part of the extensive documentation completed by the Community Website Group, with the facilitators providing a central point of contact, guidance and management. As identified in *Section 5.8: Moving Forward*, all participants were working in a voluntary capacity and therefore did not have a lot of time to commit to completing the application. This is likely to be the case for all legitimate applications. The experiences from WCW indicate that the version of the Domain Name Application completed by the test cases required extremely detailed information at an early stage of the project, and many members felt that some sections were repetitive.

The Domain Name Application included the development of tangible documentation and planning for the website.

The requirement for three references to support the Community Website Group's Domain Name Application was taken seriously, with members seeking well-known people with community standing and a high profile to act as referees. However, they also wanted these individuals to be genuinely interested in and supportive of the initiative. The referees selected were the Vice Chancellor of the University of Wollongong; the Manager Communications and Public Relations at Wollongong City Council; and the Chief Executive Officer of the Illawarra Business Chamber. The process of obtaining the references raised awareness of WCW in the community, and

these letters of support were subsequently useful for promotion and validation in a range of situations.

**Issue 26: *Limitations imposed by auDA / auCD***

Planning the completion of the Domain Name Application was a challenge, because many sections were inter-dependant, and a strict timeline was necessary to complete the application in the given time.

This problem should not affect communities applying for CGDNs after launch because the application process will be reduced and timelines not imposed.

One major benefit of completing the Domain Name Application was the development of a clear and concise vision and purpose for the website. This encouraged the group to discuss their ideas for the site, the proposed audience, and the underlying reasons for each person's involvement in the project. As a result of these discussions, the group was able to develop clear goals and a shared view of the website's purpose.

Community Website Group members found it difficult to develop and commit to a long-term plan for the website when they were not assured that they would receive the ownership rights to the site. The requirement for a Business Plan to be submitted was considered to be superfluous so early in the process. The community felt that this type of document would be more appropriate at renewal, because the group will then be well established with a clear direction and plan. However, a plan to demonstrate how the community would develop and sustain the website over the initial 2-year period was considered essential by the group. While not formally written, the group discussed long-term viability issues during the Domain Name Application planning stages. Templates for all of the required documents (such as a business plan and website plan) would have also been very helpful.

**Issue 27: *Community Website Group planning***

The members of the Community Website Group were required to develop detailed plans for the group and its website. Members found this requirement to be excessive prior to being given ownership rights to the domain.

## **5.10 Website Vision**

The vision chosen by WCW for the Wollongong Community Website was:

“To provide a central point of access from which the users can access all resources and information relevant to the local community, and act as a space where the community can interact and learn about the community in which they live. In the longer term, the site will be used as a promotional tool for Wollongong.” (Wollongong CGDN Project, 2004)

## **5.11 Website Development**

Community Website Group members were assisted in their planning process by the facilitators. This also occurred in the Bathurst test case. The facilitators provided various resources, materials and documents for the purposes of developing the website plan (which were shared across the three test cases through Yahoo! groups), including:

- Website development guidelines (provided by ETHOS);
- A review of existing community websites worldwide (carried out as part of the research by ETHOS);
- An internal OCOS report which the test case Community Website Groups were asked to complete containing questions which were used to structure the website planning process (Report template is shown in OCOS Test Case Reports)

Despite this extensive documentary support, members indicated that they preferred to conduct their own research. This attitude was particularly prevalent from those with an IT background.

The following sections will present the Community Website Group’s experiences as they navigated the process of website design and development.

### ***5.11.1 Community Involvement***

Community involvement was seen by WCW as a key factor in the viability of the community website. To involve the wider community, a competition was run with the

local primary and high schools. Students were encouraged to submit a design for the community website.

The Community Website Group engaged an external web designer to develop the website in July 2005, with the design loosely based on the competition winner's design. A temporary website had previously been developed by Community Website Group members, however as volunteers they did not have the time to develop a professional quality website. One member of the Community Website Group, who was an Information Technology professional, was employed to develop the database that formed the basis of the website. This database was integrated into the new website.

#### ***5.11.2 Initial Website Design and Development***

Numerous members of WCW had experience with web design, and discussions about the website design and development began early. From the outset, discussions were focussed on the opportunities to assist community groups in the local area. In the early stages of WCW, a website planning and design sub-committee was established. However, by the time detailed planning occurred, so few members remained that the sub-committee concept disintegrated. After numerous meetings, it was determined that the target audiences for the community website were: Youth; Sporting clubs; Multicultural community; Seniors; Small business; Community (service); Tourists; and the Arts & cultural community. Subsequent discussions about the design of the website were focused on presenting content in a way that was accessible to all these groups.

Early plans for the website included an initial static HTML site, requiring manual updates, with the inclusion of dynamic content three to six months after launch. Proposed dynamic content included live feeds of weather and news. One year after the local launch, no dynamic content had been integrated into the website.

#### ***Issue 28: Technical implementation***

auCD developed a web template that communities can purchase to speed up the web development process.

During the planning stage, responsibility for content management was assigned to the Web Design and Development sub-committee. At the time of planning, the committee included several individuals who had ADSL access and licensed software which could be used for this process. However, by the time the website was launched, all sub-committees were defunct. Only eight members remained active at the time of launch, and each member was involved in numerous aspect of the website implementation.

### ***5.11.3 Website Structure***

WCW spent a significant amount of time discussing how to structure the content on the community website. The group struggled to select groupings for presenting website content and functions, and then to relate these groupings to the website structure. There was disagreement on whether content topics or target audiences were most appropriate groupings. Since consensus was not achieved, the themes were a mixture of the above options. When web development began, the themes/groups considered appropriate were:

- Youth
- Seniors
- Tourists
- Multicultural community
- Small business
- Indigenous peoples
- Service organisations
- Special interest groups
- Arts & Culture
- Business / industry
- Sport & Recreation
- Government
- About our city

The first three groups were target audience groups – special groups for whom WCW wanted to provide suitable content. The content for each of these groups was located

thematically in other groupings. For example, tourists may want to know about content in:

- The Business Directory (e.g. hotels, eateries, shops, etc.);
- Arts & Culture (e.g. festivals, plays, concerts, etc.);
- About our city (e.g. general weather, location, road and rail services, etc.).

These hybrid groupings minimised the need to duplicate content.

The ‘multicultural community’ theme was considered important by all WCW members because much of Wollongong’s population derives from a wide range of ethnic backgrounds and cultures. One committee member lobbied for the ‘indigenous peoples’ theme, however this person coincidentally left the group soon after this time. Remaining WCW members attempted to contact local indigenous organisations, but little progress was made due to the lack of contact with and support from the local indigenous community.

Despite an investment of significant time in the themes and grouping suggested above, these were modified when the web development began. Members were still committed to providing content for the three target audience groups specified above, however it was found to be too difficult to organise the website and gather the required information. At the time of launch, the community website contained the following sections:

- Community groups
- Business directory
- Government services
- Education
- Events
- Discover Wollongong
- About Us
- Feedback
- FAQ
- Contact us

#### ***5.11.4 Professional Website Development***

WCW asked four local companies to submit tenders for the design and development of the Wollongong community website. From these tenders, one web designer was selected. Over a period of four months, the Community Website Group president and secretary liaised closely with the web designer to confirm requirements and provide feedback from the members. Upon completion of the initial website, the web designer presented the website at a Community Website Group meeting. Members were encouraged to provide detailed feedback and the group discussed the organisation of content and location of links in detail. Changes were made by the web designer based on feedback from this meeting, and a second draft of the website was provided to the Community Website Group.

#### ***5.11.5 Images***

When creating the initial draft of the community website, the web designer used images from a recently-deceased Wollongong-based photographer. This photographer had been a colleague of the web designer. When the widow of the photographer was approached for permission to temporarily use these images, she gave WCW permission to display them permanently on the website. These photographs, depicting Wollongong landmarks and community events, are used at the top of each page of the community website.

#### ***5.11.6 Database Development***

Most of the content on the community website was stored in a database. This database was designed through collaboration between three WCW members who worked in the IT industry, and built by one of these members. The database stored all information displayed in the community, business and government directories. It was planned that information for the events calendar would also be stored in the database, with the system automatically displaying the current events on the homepage and removing obsolete entries. It was also envisaged that events entered by members of the community via the website would be approved by a Management Committee member and automatically entered into the database. These plans for the events calendar, which would have significantly reduced the workload for those managing the website while ensuring up-to-date events displayed, were not implemented. The database developer, in



conjunction with the website developer, was not able to link the event information in the database to the automatic display on the website. At the time of launch, event information was being manually entered.

#### ***5.11.7 Usability Testing***

Upon completion of the second draft of the community website, which was approved by the committee, the Community Website Group Management Committee organised professional usability testing on the website. The results of usability testing revealed some problems, mostly related to the directories. These results were reviewed by the website and database designers, with the majority of problems requiring database modifications. All problems that could be resolved by minor modifications were addressed; those requiring significant changes were delayed until more resources were available in the medium-term.

#### ***5.11.8 Development Software***

The Community Website Group faced the question of which software was the most suitable for their website. Options ranged from Content Management Systems, to web website software, to open source software and finally to HTML code. Initial investigations were based on open source solutions, with information shared between the Bathurst and Wollongong groups. After much consideration, open source solutions were dismissed due to their management systems being difficult to use and their inability to provide all required functions. Content Management Systems were briefly researched but found to be too expensive.

During February 2005 the Community Website Group participated in discussions with the national telecommunications provider Telstra. Telstra's Wollongong office offered to provide Telstra's web portal management software to the Community Website Group for a period of 12 months at no cost. The software had the ability to manage various content formats, as well as link to external data such as weather. The offer was discussed at a Community Website Group meeting. Members believed that, while very generous, the offer was likely to leave WCW in a difficult and expensive situation at the end of the 12 month period. Telstra's system was proprietary and did not allow simple

output of the content from their management software to any other system, meaning the Community Website Group was 'locked in' to continuing to use Telstra's system at a high cost (approximately \$20,000 per annum) or re-entering the content in another system after 12 months. Based on the potential problems at the end of the 12 months, the Community Website Group voted against accepting Telstra's offer. Members saw themselves as developing a "long-term resource" and were aware of the fact that some approaches, such as this one, would only be suitable for the short term or would require the Community Website Group to generate a large income stream in only 12 months

The website was initially developed using static HTML and had limited content. However, once the database was populated, it was linked to the website and used to provide the website content. The web developer used standard web development software to create the website. Members are aware that the selected static HTML option means that the website will need to be upgraded on a regular basis as organisation details and events change. While this has been the easiest and cheapest way to set up the initial site, it lacks the functionality to attract significant sponsorship and has meant members need to constantly update the website manually. This situation is seen as being unsustainable in the long run.

#### ***5.11.9 Hosting***

Each of the test cases attempted to find an ISP to host their sites, and in all three test cases this hosting was provided as an in-kind sponsorship, i.e. a local ISP would host the site if given appropriate recognition on the site. WCW was offered three such hosting options. The first required that the site use only static HTML, the second allowed dynamic web content and the third, with Telstra, offered a full suite of hosting, software and support services. Thus the decision about hosting could have a significant effect on the content and functions provided by the website. The Wollongong test case was fortunate to have the University of Wollongong allow the temporary community website to be hosted using the University's infrastructure while the Community Website Group negotiated a more permanent arrangement.

Naturally, companies offering hosting also imposed certain conditions, including the bandwidth that could be provided, the amount of storage space and software that could

be loaded onto their servers. All of these impacted on the functions and content that could be provided. Some sponsors, such as Telstra, also wanted to impose restrictions on specific types of content, such as content concerning gambling, alcohol and sex. This content might reflect badly on Telstra, which would be identified on the home page of the community website. Consequently, the Wollongong test case was faced with the dilemma of having extremely good hosting resources at the cost of some control over their content.

One means of avoiding these complications is to purchase the hosting services, rather than to accept them as in-kind sponsorship. This may not be a universal solution, as many local communities still lack the bandwidth or ISPs with the sufficient resources e.g. disk space, to support the full range of content and functions that might be desirable.

The second hosting option, allowing dynamic web content, was offered by a Wollongong-based organisation called LocalMall. This was the preferred option, with the LocalMall partnership continuing into 2007. In return for the hosting, a small text link to the LocalMall website was included on the bottom of each web page. The server on which the website is hosted is protected by a firewall and the website is backed up on a weekly basis by LocalMall.

**Issue 18: *Viable level of funding***

**Issue 28: *Technical implementation***

**Issue 29: *Infrastructure***

The Community Website Group was required to commit to a hosting arrangement early in the website development process. Varied costs (direct and indirect, short-term and long-term) were considered, availability of infrastructure, and facilities of each hosting option impacted the choice of hosting provider.

**5.11.10 *Funding***

Several of the issues described above have solutions that require the Community Website Group to be able to pay for web site development, hosting, or other support services. The test cases reveal three different scenarios in this regard. Wollongong did

not attract this cash sponsorship and so had to rely on in-kind sponsorship from the University and ISPs.

## **5.12 Content and Functions**

Members of all three test cases were very enthusiastic about getting the website under way as quickly as possible. Discussion of the content and functions that might be provided on a community website took place very early. Members of the public who attended the initial meetings often wanted to get some idea of the scope of the proposed community website – how it would relate to existing sites in the community and what functions it might offer. The test cases appear to have realized at an early stage that it would be extremely difficult to move all of the existing community content onto the community website itself, and so it was quickly decided to “link-through” to existing web resources. Members were confident about this decision based on earlier community consultation, using the links established with community members and groups to avoid duplication of content within the same community.

Initially, the test cases seemed keen to provide a high level of functionality but this was tempered by three major considerations: liability, technical issues and cost. The Community Website Group identified the following functions as essential at the time of the website launch:

- an events calendar
- community, business, and government services directories (where community groups and businesses can register themselves)
- general and tourism information about the local area
- information about WCW and the CGDN scheme
- a feedback mechanism

Functions considered but not initially implemented included weather information, profiles of community members (changed and updated regularly), classified advertisements and online voting on local issues. These were again considered in October 2006 (after the national launch), but the Community Website Group did not have enough volunteers or funding for implementation. The implementation of interactive functions, such as chat rooms, weblogs and discussion lists, was postponed

until the associated potential legal issues (identified in Section 5.12.1) were investigated and measures taken to minimise the Community Website Group's liability.

#### ***5.12.1 Possible Liabilities***

Discussions of functionality often resulted in some early decisions about the liabilities of the group. For example, questions were asked about the liability of the group for comments made on a forum – would WCW be liable if these comments were defamatory? Similarly, questions arose about attachments in email, images displayed on bulletin boards and so on. This in turn often led to a discussion of the liability for content on other sites to which the community website was linked.

While Bathurst and Ballarat had members with a legal background who were able to answer these questions or direct group members to legal experts who could, the Wollongong Community Website Group has yet to resolve these issues of liability and they remain a source of deep concern for members.

#### ***Issue 20: Skilled Community Website Group members***

Wollongong Community Website Group members did not have access to legal expertise within their membership, and were concerned that the association may be liable once their website was launched. Standard legal documentation should be provided to all Community Website Groups by auCD to reduce the demands on Community Website Groups' limited resources. It would be extremely useful if these issues could be resolved and included in a "How To" kit.

This issue relates directly to the current policy in one particular situation, namely the inclusion of local content. In the current Dispute Resolution procedures, there is an example suggesting that a Community Website Group might be sanctioned because the community website had content that was not "local".

#### ***5.12.2 Events Calendar***

Discussions with Wollongong City Council resulted in an agreement with the Community Website Group to share details about local events. While the Council had a

calendar on their website, staff stated that it was not comprehensive. The Community Website Group planned to develop an automated system to extract data from the Council's calendar and insert it into the database, however members of the Community Website Group never had the time or the technical knowledge to solve this issue. To date, events in the events calendar are manually located and added by volunteers of the Community Website Group. Community members are able to submit event details on the website, but this feature has not been heavily used to date. Four event entries were received in the first week after launch; no submissions were received in the first three months of 2007.

### ***5.12.3 Directories***

The Community Website Group chose to provide three separate directories: community, business, and government services. Community groups and businesses have the ability to register and update their own details, free of charge. Government service details are maintained by the Community Website Group Management Committee. Immediately after launch a number of businesses added themselves to the directory, however, since this time there have been few additions. The Community Website Group planned to offer enhanced business directory listings, providing a link to an existing website or hosting a single-page advertisement for the business. The Community Website Group Management Committee was advised that legal documentation was necessary prior to publicly offering such hosting. A draft was prepared by a Community Website Group member, however this has not been finalised due to a lack of time and funding to pay for legal advice.

Community Website Group Management Committee members have been hesitant to invest significant resources in the development of the business directory due to the lack of support given from the business community. Despite repeated invitations to the local business chamber, the Wollongong test case did not attract much interest from the business community and the business chamber management staff were unwilling to meet with Community Website Group members. In the long term there is still an understanding that the business community will be necessary to the long term survival of the community website.

#### ***5.12.4 Local Information***

The website provides general and tourism information about the local area. Information is included about the geography, history and culture of Wollongong.

#### ***5.12.5 WCW and CGDN Information***

The website has also provided information about WCW and the CGDN Scheme. This information has been designed to let individuals from Wollongong and other communities know about the Wollongong CGDN Project and how to become involved.

#### ***5.12.6 Feedback***

A feedback mechanism has been provided on the website for community members to voice concerns about issues and content on the website. Since launch this feature has been used by community members to request changes to details and to suggest future improvements to the community website.

#### ***5.12.7 Fourth-level Domains***

One method of generating income and traffic that was considered by the Community Website Group was the sale (or lease) of fourth level domains (4LDs) to local organisations and businesses. For example, *sport.wollongong.nsw.au* may have been leased to the local basketball or rugby league competition organisers for a small fee. This would raise money and increase awareness of the community website. The Community Website Group also considered more specific 4LDs linked to business names, such as *shoewarehouse.wollongong.nsw.au* to a business named 'Shoe Warehouse'.

The Community Website Group Management Committee was in the process of developing rules for the sale and use of the 4LDs, in conjunction with Bathurst Community Website Group, when auCD decided that they did not want communities to be able to sell or lease 4LDs.

**Issue 5: CGDN Policy modifications**

After assuming control of the CGDN Scheme, the auCD General Manager chose to make numerous changes to the CGDN Policy. These changes forced the Wollongong Community Website Group to alter plans they had spent much time developing, which wasted the group's limited resources.

auCD's decision occurred in January 2006, soon after the first auCD General Manager had been appointed. Both the auCD General Manager and auDA staff acknowledged that the auCD General Manager had no background understanding of the CGDN policies and processes, and little understanding of community ICT projects. However, this decision was made by the auCD General Manager without consultation with any of the test case communities.

**Issue 30: Communication between auCD and Community Website Group**

The auCD General Manager was unwilling to discuss changes with the test case community members prior to implementation, despite an acknowledge lack of experience and familiarity with similar projects. Many of the experiences and lessons learnt by the communities were not used to improve the CGDN Scheme.

The decision to modify the CGDN Policy was in contrast to all other .au (Australian) name spaces. Responses for explanation from the auCD General Manager led test case members to believe that auCD wanted to restrict the communities' ability to use 4LDs so auCD could make money off them in the future. The only reason given was that auDA would not be able to control the content on the 4LD pages, and consequently CGDN communities (and possibly auDA) might be able to be sued for what is on them. (Parkinson, 2006c) This explanation was considered invalid by Wollongong Community Website Group members, and their position was supported by Bathurst test case members. No such restrictions existed in other domain name spaces, despite this situation being the same for all websites. Community Website Groups were encouraged to obtain insurance against such problems, and the Community Website Group continues to hold appropriate insurance against such legal actions.



**Issue 2: Coordinated support for Community Website Groups**

Communities were not provided with any advice about issues common to all test cases, such as the need for insurance. It would be more economical for auCD to provide general advice and recommendations about the requirements for all CGDN Projects than for each Community Website Group to independently investigate these requirements.

auDA rules require all policy changes to be open to community consultation before approval. The auCD General Manager did not conduct any community consultation prior to altering the 4LDs rules in the CGDN Policy. Therefore, the validity of this policy can be challenged (Scully, 2006b).

**Issue 5: CGDN Policy modifications**

The changes to the CGDN Policy by the auCD General Manager were not implemented in accordance with auDA procedure, because no public consultation occurred. It is likely that, if challenged, the CGDN Policy would not be considered binding.

**5.12.8 Community Inclusion / Exclusion**

The CGDN Policy requires that Community Website Groups are inclusive of all community members. In the current CGDN Dispute Resolution Procedures, there is an example suggesting that a Community Website Group might be sanctioned because the community website had content that was not “local”. While the Wollongong test case was unaware of this example, per se, they did discuss issues related to local content.

The greatest concern to Wollongong Community Website Group members was the CGDN Policy implication that every business and community group had the right to be represented on the website. While in theory the Wollongong Community Website Group was open to all members of the community, existing members believed that there were some elements of the community that it was unnecessary to promote on the community website (such as workers in the sex industry). Members of the Community Website Group have not actively included questionable entries in their directories,

however extensive discussion did not result in any clear guidelines for the inclusion, or exclusion, of questionable community members, groups or businesses.

**Issue 13: *Broad community representation***

**Issue 37: *Website content***

With the right for all community members to be represented on the website, the Community Website Group faces issues of determining ‘appropriate’ methods of representation, and ‘appropriate’ website content.

Community Website Group members were also concerned that ‘legitimate’ community groups which did not have an existing URL would not be represented on the community website. There were discussions about how the Community Website Group could support such groups. This support might be in the form of entries in community directories that did not include links to web pages, assistance in developing web pages (e.g. in conjunction with the local TAFE or University) and hosting of web pages for small or disadvantaged community groups. Based on information provided by the Bathurst test case, Wollongong Community Website Group members are investigating the possibility of working with local educational institutions to provide work experience to students and have these students develop web pages for community groups.

**Issue 2: *Coordinated support for Community Website Groups***

**Issue 25: *Presence of volunteer workers***

Numerous volunteer work schemes have been investigated by the Community Website Group (and Bathurst Community Website), such as high school and TAFE work experience. Coordination of such schemes by auCD would assist all parties involved.

### **5.13 Managing and Launch**

Due to extensive delays in the development, distribution and assessment of the Test Case Reports, and the establishment of the name spaces, the Wollongong test case did not receive access to their wollongong.nsw.au domain until mid-2006.

### ***5.13.1 Problems and Delays caused by auCD***

The sale of geographic names in com.au and net.au impacted negatively on both the morale of the Wollongong test case community members and the value of the CGDNs. Community members were angry that auDA had chosen to ignore other funding concepts proposed by community members and the OCOS Project Manager. See Section 4.12 for further discussion.

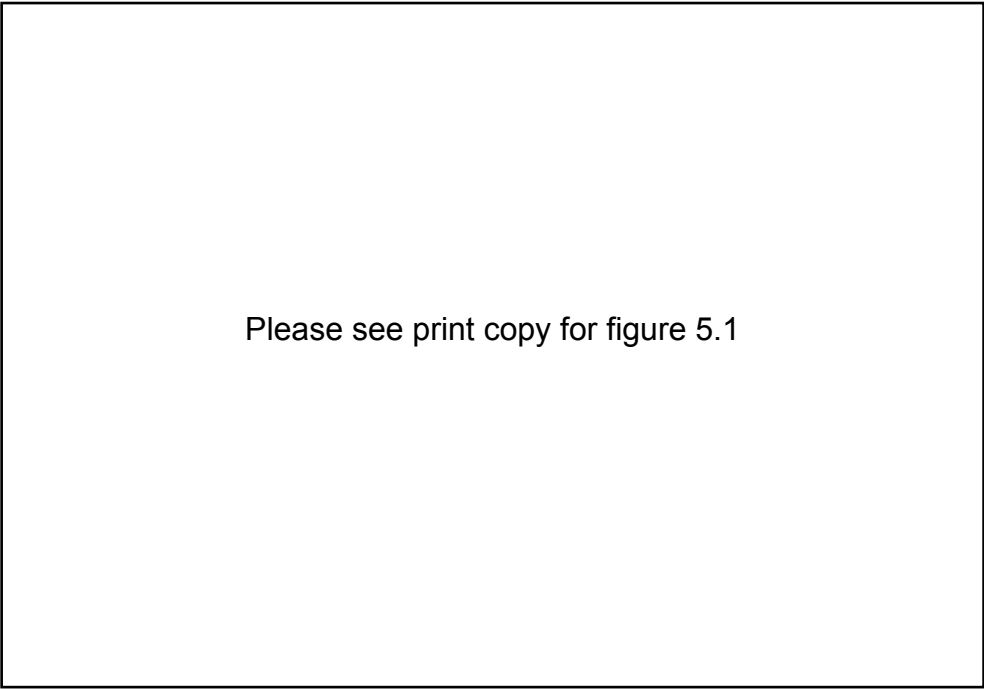
As a temporary measure during these delays, the Wollongong test case was allocated wollongongnsw.org.au. The Wollongong Community Website Group had been actively raising awareness and promoting the CGDN, as part of the requirements in the application process. The allocation of the org.au domain was difficult to explain to the community and caused confusion about the CGDN Project. The Community Website Group chose to delay the public launch of the community website until they had the correct domain name, and did not promote the website while it was hosted at wollongongnsw.org.au. The promotion of this temporary website would have been an unnecessary expenditure.

#### ***Issue 3: Organisational issues within & between auDA & auCD***

The test case faced the challenge of maintaining community awareness of and interest in the CGDN, while not wasting resources promoting a temporary domain. Communities applying for CGDNs in the future are unlikely to face this problem.

### ***5.13.2 Local Launch***

On May 17, 2006 the new WCW website (Figure 5.1: ) enjoyed an official launch to the local community and media. The launch was attended by local councillors, the Wollongong Lord Mayor, the OCOS Project Manager, local community advocates, community members, sponsors, local media, and a member of the Bathurst test case. Access to the media to promote the launch was obtained by the University of Wollongong's Media Unit.



Please see print copy for figure 5.1

*Figure 5.1: Wollongong CGDN website, June 19 2006*

### **5.13.3 National Launch**

After extensive delays caused by auDA and auCD (see Section 5.13.1), the national launch of the CGDN Scheme was held on August 8, 2006 in Sydney.

## **5.14 Medium-term Vision for the Community Website Group**

Medium-term refers to the period 1 to 3 years after website launch. Many of the concepts and functions considered in the early stages of planning were considered unrealistic in the short term, and were relegated to medium-term plans. The following section will discuss the issues that have impact on the current and future situation of the Community Website Group.

### **5.14.1 Funding**

In the long-term, members of the Community Website Group Management Committee had hoped to employ a website manager (either part-time or full-time) to develop and maintain links with the community and keep the website content current. For this to

become feasible, the website had to build up a significant income as it developed, allowing the website to be self-funding. While a community directory was implemented, the Community Website Group Management Committee believed that community groups should not be asked to pay for a listing because the website was designed to support these community groups, and was a non-profit. This belief is held by many community website groups (see Section 2.4.4.4). At the time of launch, the only method of raising money from the website was through companies paying for enhanced directory listings. There was very limited interest in these listings from the business community. This was largely attributed to the lack of promotion of the namespace, with auCD not completing the expected national promotions. Without broad community awareness, it is unlikely that any community websites developed under the CGDN Scheme will flourish. A lack of community awareness, and hence participation, has been identified as the major reason for the failure of numerous community websites (see Section 2.4.4.7).

**Issue 16: *Financial investment from the community***

Business was unwilling to provide support for, or participate in, the development of the community website. A higher level of community awareness, developed through a national advertising campaign, is likely to reduce this problem.

Obtaining financial investment from the Wollongong community was more difficult than in other test cases. This may be attributed to two situations specific to the geographic area. Previous technology-based schemes (including website-based initiatives) in the area were strongly supported by the local business community. However, they were largely unsuccessful. Businesses considered that such initiatives were unlikely to provide value for money, and were therefore wary about becoming involved. Also, studies on the use of technology (and specifically e-business) in the Wollongong area have shown that small to medium businesses are unwilling to commit to any type of e-commerce (MacGregor and Vrazalic, 2007). Even the provision of informational websites (as opposed to more advanced e-commerce functionality) was not considered important by Wollongong-based businesses. These findings are significant when compared with cities of a similar size and nature internationally. Therefore, while community awareness is likely to have some impact on business

participation, some of the factors contributing to business participation are likely to be endemic to the area.

Based on the Community Website Group's financial position in mid-2007, it is unlikely that they will be able to employ any staff with the current financial situation. Unless more options are established to raise funds, the Community Website Group will also not be able to afford staff in the long term.

The Community Website Group Management Committee are aware that significant business and financial planning is necessary to ensure the website is self-funding. A variety of sources for funding were considered in the early stages of Community Website Group establishment and website development, including sponsorships, grants, donations, website advertising, and the provision of a business directory. A partnership was established with Wollongong City Council. Other organisations such as the Illawarra Business Chamber were contacted but no partnerships were established.

All three test cases have had difficulty obtaining funding. The most significant factor that limited the Community Website Group's ability to gain access to funding was the lack of community awareness about the CGDN Scheme, which is supported by Fisher and Craig's (2005) research finding that the issues of achieving critical mass and obtaining funding were related (see Section 2.4.4.4). Responsibility for a national advertising campaign was assigned to auDA and auCD. Neither of these two bodies conducted any coordinated marketing for the CGDNs. Despite significant local campaigns managed and funded by the Wollongong and the Bathurst test cases, raising and maintaining community awareness was a significant problem.

#### ***5.14.2 Membership***

Community Website Group members were conscious of the importance of maintaining, and where possible expanding, membership levels. However, the Community Website Group was unable to obtain any new members after the initial publicity drive.

The issue of volunteer exhaustion became a significant problem for the Community Website Group Management Committee. The second president of WCW, who worked

extensively on the website, left the group citing an inability to continue to commit his time to the project. This was the same fate suffered by the first vice-president and two general Management Committee members.

As mentioned in Section 5.14.1, Community Website Group Management Committee members are hoping to be able to employ a website manager in the future, which would ease the problem of volunteer exhaustion. To ensure a smooth transition of roles between members as new Management Committee members are elected, and with the possible future employment of a website manager, the development of a succession plan has been proposed. However, with limited time to devote to the project, this plan has not been developed.

Community Website Group Management Committee members believe that they should provide increased benefits to members to reward them for their commitment and encourage them to continue participating in the development of the community website. To date, no benefits have been offered. With annual membership costing only \$2 per person, the Community Website Group does not have a large budget to commit to these member benefits. E-mail addresses for each member have been considered, however this may incur a significant cost to the Community Website Group depending on the hosting provider. The level of benefits ultimately provided to members is likely to be directly related to the cost of membership. The importance of this issue decreased after initially discussed, with many 'fringe' members no longer participating. Those members who have remained active have indicated they do not expect benefits. This issue will be revisited if new members join.

### ***5.14.3 Community Involvement***

The Community Website Group Management Committee recognised the importance of ongoing community involvement (as specified in the literature, see Section 2.4.4.7), however acknowledged that they did not successfully interact with the community after launch. This was entirely attributed to a lack of available volunteers to develop concepts, spread the word and make links with community groups.

The Community Website Group Management Committee implemented an online feedback mechanism which allowed community members to submit requests and ideas related to the community website. This feature was implemented as a way to engage the community, and ensure that they were meeting the community's needs. However, this feedback mechanism was not used by the wider community. The most plausible explanation for the lack of use is low community awareness of both the community website and the feedback mechanism. Other feedback mechanisms have been considered, including online and print surveys and polling. These have not been implemented due to resource constraints.

Numerous offline community involvement concepts to develop community support and build stronger bonds with the community have been considered, however these also have not been implemented due to a lack of volunteer time and funding. These concepts include:

- The development of online access points at local cafes, community centres etc.
- Online discussion groups
- Links to donate to a local charity
- Financial sponsorship of local community events
- Working with existing print publications to share information
- Training for community members (e.g. computer skills, Internet skills)
- Interactivity on the website so the community's views can be heard and included

#### ***5.14.4 Content and Functionality***

When initial planning was conducted, many ideas for the expansion of content and functionality were recorded. Comprehensive coverage of local organisations, events and activities was planned, along with interactivity and online polls on local issues. The ability for members of the community to update their own content on the website was proposed. For example, the local sports clubs could be able to enter the scores for their games, and upload pictures where appropriate. Members recognised early in the process that without extensive community involvement or a paid manager, the demands of regularly updating content were likely to lead to volunteer exhaustion in the medium-term. Despite a group of thoughtful and enthusiastic members, these ideas were not



implemented. Again, this can be attributed to a lack of resources, ultimately leading to volunteer exhaustion.

### **5.15 Post-Launch Experiences**

Members of the Community Website Group believed that community interest would increase after the public launch of the Wollongong CGDN website and the national release of the CGDNs. However, this did not occur. The members of the Community Website Group that were involved in its development remain committed to the CGDN website, and maintain the events calendar. Few other changes have been made to the website since its public launch.

### **5.16 Reflection**

In the conception of the CGDN Scheme, each CGDN was intended to represent only a single suburb. When implemented in this way, the size of the community is relatively small. However, when the CGDN Scheme was implemented in Wollongong the ‘wollongong.nsw.au’ domain was used to represent the entire city of Wollongong, rather than just the suburb. This decision was made for practical reasons. While this allowed for greater community representation, and provided a greater drawing area for active community website management membership and website content, it raised other concerns. Based on the experiences of this test case, a community of this size (approximately 200,000 people) is too large, and lacks the cohesion necessary, to successfully include all individuals within the geographic area. The cultural and economic diversity of this test case also caused significant difficulties in engaging and representing all segments of the community. The size of the geographic area that the Wollongong test case was attempting to cover did not allow it to engage the existing community. It is possible that selecting a smaller, organic community (such as one of the suburbs that has active or regular community events) within Wollongong would have increased the success of the community website, because of greater community engagement despite the smaller number of people from which the management group can be drawn.

This test case demonstrated the relationship between community culture, community involvement and financial stability. The lack of business participation in this test case was heavily influenced by prior negative experiences with other technology-based community projects. While these experiences were outside the control of the CGDN test case, they had a significant impact on the ability of the test case to become financially secure, due to the lack of business support. Attempts at community engagement were genuine, however they were not highly successful. This was, in part, attributable to the facilitators' lack of community engagement skills. Beginning the community engagement process with existing community networks, such as through neighbourhood centres, would have minimised the burden of conducting local promotion while also providing easy access to community members who are interested in such projects, increasing the chance of community website success.

The lack of available funds, in combination with the extensive planning required as part of the CGDN application process, led to frustration among the community website management group. Because all group members were volunteers and the group did not have the funds to pay for the documentation to be completed, this process took significantly longer than initially planned. Without facilitators who were responsible to OCOS, it is likely that this process would have taken even longer. The experiences in this test case indicate that, for such a scheme to be successful, either seed funding must be given to participating communities or the required documentation must be reduced. However, after the basic community website is established, communities should be required to be financially sustainable. The ability of community groups to get access to external funding has been shown to be influenced by clearly developed plans, as well as contacts held by the facilitator and members. The culture of the Wollongong community is one in which funds are often obtained by 'knowing someone', and the size and profile of the community website group members is therefore significant.

There was wide interest and enthusiasm about the concept of a community-driven website in Wollongong from the community sector, largely because all similar previous websites had focussed on the commercial sector. Due to the demands placed on the community website group, the number of active participants fell significantly in the first 12 months after formation. As individuals left the group, the group lost access to the skills held by these members. This experience highlighted the importance of such skills,

and the need to ensure that people volunteering to help do not feel heavily burdened by their participation. The documentation and practical preparation that was conducted when the group had members with a broad skill base demonstrated varied and interesting approaches to community engagement and community website development. The implementation of much of this planning was successful. One such example of creative planning (the concept of 4LDs) was impacted by changes to the CGDN Policy, reinforcing the need for transparent policy development and adherence to procedures for significant policy changes. However once the size of the group was reduced, fatigue and frustration of members became evident. While participant drop-off is likely to occur in any similar project, this highlights the importance of allowing the group to act in a reasonable timeframe. Within six months of initial formation, a community website group should be able to complete all necessary documentation, receive access to their CGDN, and have a basic community website available. Delays longer than this frustrate volunteers involved and do not allow the group to capitalise on early promotion of the scheme in their local area. The documentation required at the early stages should therefore be the minimum required to demonstrate commitment to ideals of the program. Experience in this test case has shown that elements with thoughtful planning were the most successful; therefore it may be appropriate to require community groups to submit documentation of their on-going planning to ensure that this planning process is built upon.

## **5.17 Conclusion**

The Wollongong test case experienced a range of difficulties. Despite participating community members being strongly committed to the community website, and to the values of the CGDN Scheme, the development of the community website was not grounded in any established community groups. Volunteer recruitment processes were largely influenced by the geographic limitations imposed on each CGDN as part of the CGDN Scheme. The resulting membership encompassed individuals with varied skills, but did not include any experienced project workers able to ground the project in the community environment. The lack of established links to the wider community caused the group to experience difficulty maintaining direction, support, and community engagement. Other problems outside the control of the test case were varied, and included changes to the CGDN Policy, heavy reporting requirements, a lack of support

from auDA and auCD in the early stages, and extended delays before gaining access to their CGDN.

Despite these problems, a small group of individuals have remained committed to the CGDN website, and this group is hopeful of obtaining resources in the near future, which would allow them to employ someone to maintain and continue to build the community website. With these issues in the past, WCW members are hopeful of a positive outcome for the community website. This chapter has described and analysed one approach to developing a community website, developing a deeper understanding of issues faced by groups developing community websites (*research goal iv*). In conjunction with the description and analysis of two other approaches to developing a community website in **Chapters 6 and 7**, and the summary comparison provided in **Chapter 8**, this chapter has also addressed *research goal ii*.

## **Chapter 6: CGDN Project 2 – Bathurst**

### **6.1 Introduction**

Bathurst is a medium sized country town located two and a half hours west of Sydney (Bathurst Visitor Information Centre, 2007). Bathurst is a city that has a strong focus on motor racing, education and farming. The town was Australia's first inland settlement and now has a population of 37,500 with strong growth at a rate of 1.2% per year (Bathurst Regional Council, 2007).

The Bathurst Community Website Group was the first Community Geographic Domain Name (CGDN) group, incorporating in March 2004 under the name Bathurst Community Website (BCW) with a nine member Management Committee (Bathurst CGDN Project, 2004). This chapter presents an overview of the BCW test case experiences.

This chapter describes the facilitation arrangements for the Bathurst case study, and the resulting Community Website Group and website. The process used to inform and involve the community, and to develop a CGDN Management Committee is discussed, followed by an explanation of the legal arrangements used to satisfy the CGDN Policy. A brief discussion of the documentation, website planning, and web development for the website is also provided. The chapter concludes with a description of the website launch and post-launch experiences.

### **6.2 Facilitation**

The Bathurst test case was facilitated by the OCOS Project Manager. The facilitator was employed by OICT, a state government entity based in Bathurst, and was also the key contact for the facilitators of other test cases prior to the establishment of auCD.

Bathurst's facilitator was proactive in locating key individuals in the community and encouraging them to become involved. Meetings, resources, publicity, funding and communication mechanisms were all organised by the facilitator. She also provided

assistance to the Community Website Group with their website planning by arranging and moderating a website planning workshop.

Feedback from all interviewed members of the Bathurst Community Website Group (Bradbery, 2004; Cameron, 2004; Clancy and McCormick, 2004; Fawkes, 2004; Frost, 2004; Gelin, 2004; Greenhalgh, 2004; Smith, 2004a) indicated that they believed that facilitation was vital to the success of the project in the Bathurst. Members suggested that their facilitator's familiarity with the process, the relevant 'rules' (CGDN Policy, procedures and legislation) and the community allowed her to be of maximum assistance to the Bathurst community. The group appreciated that their facilitator encouraged progress and decision-making, without taking control from the community. Ideas like "Her assistance has been invaluable" (Clancy and McCormick, 2004) were commonly expressed. The importance of the facilitator identifying potential participants and leaders, providing enthusiasm and direction, and maintaining relationships, was stressed by members of the Community Website Group.

The Bathurst facilitator provided extensive support to members in the completion of OCOS and auDA documentation. Numerous members stated that completion of these documents would have taken much longer without an active facilitator. However, some members observed that the role of the facilitator for the test case has been more significant than it may be for future communities, due to the high level of reporting requirements from the test case communities. Based on recommendations from the test cases, CGDN application documentation has been reduced for future applications.

**Issue 21: *Excessive documentation requirements***

The facilitator played a significant role in completing the CGDN application documentation. This was necessary due to the extensive nature of the documentation, and the volunteer capacity of all other people involved. The facilitator's role in completing this documentation is likely to be reduced in future application, due to the consolidated version of the CGDN application to be completed by non-test case communities.

### **6.3 Introducing Bathurst.nsw.au to the Community**

Strong commitment for the CGDN Project, and for Bathurst's involvement in the CGDN Project, was demonstrated from many areas of the Bathurst community.

#### ***6.3.1 Informing & engaging the Community***

Initial contact with a range of existing community groups and individuals was made by the facilitator between December 2003 and February 2004. Consultation included phone calls, emails and personal visits to a range of key stakeholders. Initially, stakeholders were identified by the facilitator. Through consultation with these stakeholders, further stakeholders were identified. A key contributor for stakeholder identification in the early stages was the local Chamber of Commerce President, who like many locals has remained very supportive of the idea of the community owning its CGDN. The Chamber of Commerce President supported the position that this asset should be jointly owned and shared by all the local stakeholders.

This process of identifying key individuals within the community was highly successful. The facilitator and community members both identified similar reasons for this success: the facilitator had extensive links with the community having lived in the area for more than 25 years; and the community was small enough that identifying appropriate stakeholders meant that most members of the community could be connected.

A number of people indicated that they were already heavily committed to various activities, and did not have time to participate in setting up a CGDN website for the community. However, they did express an interest in being informed about the progress of the CGDN Project.

Those who demonstrated an interest initially were encouraged (along with all members of the community) to attend the first public meeting and became part of the Community Website Group. Others who expressed an interest but were unable to attend any initial meetings about the CGDN Project were contacted on an individual basis at the appropriate time. The broader community was informed about the CGDN Project and

Bathurst's public meeting through multiple articles in local newspapers and interviews on local radio stations.

Due to the facilitator's ability to connect with the local community, no issues related to informing and engaging the community were experienced. The lack of issues related to connecting with the community is largely attributable to the facilitator's close relationships with key individuals within the community, including leaders in local government, the media, social groups, sporting organisations and various levels of education. The formation of such relationships had been conducted over many years, in many cases because of the 'country town' feeling of Bathurst. The informal social networks within Bathurst also played a role in spreading information about the community website, and complemented the formal promotion conducted by the facilitator.

### ***6.3.2 Holding the Public Meeting***

A public meeting was held in the Bathurst Function and Convention Centre on February 18, 2004. The strong attendance (over 60 individuals) was attributed to extensive local promotion and personal contact with individual local stakeholders. Many present were astounded at the attendance, as Bathurst public meetings are generally not well attended. The purpose of the meeting was to provide information about the CGDN Scheme, to promote the opportunity for Bathurst to be involved in a test case, and to engage the community and increase community commitment to Bathurst's CGDN Project. A second meeting was scheduled for February 24, 2004 to begin the process of setting up a legal entity, as required by the CGDN Policy (.au Community Domains Trust, 2006a). Advertisements for the second meeting were distributed at the first meeting.

After both these meetings, the group "... arranged regular radio interviews and newspaper articles to keep the community informed about what's happening. Hopefully, it [would] also help recruit more members." (Frost, 2004) This method appeared to be effective, with membership growing every month for the first four months.



## **6.4 Committing to the Project**

Bathurst has received a large amount of support from many segments of the local community, including local government, business and community organisations. All attendees at the public meetings were invited to become general members of the Community Website Group. At subsequent meetings, attendees were invited to become active members of the Community Website Group Management Committee, and sub-committees established to manage specific areas of the Bathurst website's management and content.

### ***6.4.1 Community Representation***

Local and community organisations have been supportive of the Bathurst CGDN Project. Organisations and community sectors that were represented in the Community Website Group membership include:

- Bathurst Information and Neighbourhood Centre
- Bathurst Regional Council through their IT Manager, who was also involved in the development of the initial CGDN proposal made by OCOS to auDA (see Section 4.2)
- Bathurst Memorial Entertainment Centre Manager, representing numerous entertainment groups
- Charles Sturt University's Bathurst campus
- 'Our Place' Movement and Cafe

Sectors represented include:

- Legal sector with members from two local law firms
- Creative arts sector through numerous local representatives
- Local print and radio media
- Education sector through the Department of Education and Training's CTYC Manager
- Marketing
- Technology sector with local web specialists and ISPs participating
- Sport and recreation clubs

The Community Website Group negotiated with a number of organisations to increase community linkages and develop greater services. Collaboration with the local Community Technology Centre (CTC) was considered to facilitate sharing of resources, and to increase credibility and membership of the Community Website Group, however no arrangements have been implemented. Investigation of partnerships with local educational institutions and associated sponsors to develop websites for local organisations is ongoing.

Most members initially became involved in the CGDN Project because of a desire to provide quality tourism information about Bathurst to the wider community and the world (Clancy, 2005; McCormick, 2005). Community Website Group members believed that the Internet was the most efficient method of providing this information, because access is becoming so widespread.

Community Website Group members were also keen to be involved in the trial of the CGDN Scheme (Gelin, 2004; Clancy, 2005; Ng, 2005), and throughout their CGDN Project they discussed resources and activities that could be used to make the process easier for communities attempting to build a community website in the future.

Due to the facilitator's success with involving individuals from many segments of the community (McGuire, 2004a), and the arrangements established with local organisations, no issues relating to community representation were experienced.

#### ***6.4.2 Internal Communication***

The Bathurst Community Website Group developed two Yahoo! discussion groups to manage their online communications. These groups were set up to be accessed and used by Community Website Group members to communicate and share documentation on a number of issues and to allow communication with each other and to work on activities and tasks between meetings. The first discussion group was open to all members of the Community Website Group, and was used specifically to communicate meeting details and discuss high-level plans for the website. The second discussion group was used for the Community Website Group Management Committee members to communicate with each other, share more sensitive information (such as contracts under negotiation),

discuss detailed issues and plan meetings. Yahoo!'s online file management feature was used by both discussion groups, and was particularly useful when members were jointly completing OCOS and auDA applications. The Yahoo! discussion groups also allowed the group to build social capital.

#### ***6.4.3 OCOS Reporting***

The OCOS Project Manager was also the facilitator for the Bathurst test case. Members of the test case were able to regularly meet in person with the OCOS Project Manager, and telephone and email contact was common (Fawkes, 2004). The OCOS Project Manager was a member of both Yahoo! discussion groups.

#### ***6.4.4 Meetings***

A regular meeting schedule was organised by the test case facilitator. Throughout the first year, the management committee met every fortnight, with the general public meeting once a month. After this time, public meetings continued to be held monthly with management committee meetings held as necessary. All meetings were conducted at the Bathurst Memorial Entertainment Centre, with the venue hire costs waived by the local council. Due to the high level of community support, no issues were recorded.

#### ***6.4.5 Resources***

One member of the Community Website Group Management Committee worked for the Central Tablelands Youth Connection (CTYC), and organised the provision of extra meeting and training venues and secretariat support through CTYC. Bathurst Regional Council was also supportive, with the Community Website Group involved in ongoing negotiations to assume some of Council's training responsibilities for a fee. The group also negotiated the free use of meeting facilities and venues courtesy of Bathurst Regional Council's support. Due to the generosity of the local community, the Community Website Group did not experience issues relating to resourcing.

The Office of Information and Communication Technology (OICT) (a government body) granted each of the New South Wales-based test cases (Wollongong and

Bathurst) \$10,000 to assist in the funding of the test case. The Bathurst Community Website Group spent the majority of this money on website development and promotions. This large injection of funds into the Community Website Group allowed progress to be made much more quickly than if the members had been required to conduct fundraising or complete the tasks themselves.

## **6.5 Community Website Group**

Feedback from members indicated that Community Website Group members felt that they were representative of a wide cross-section of the community, attributing this to the large amount of promotion prior to formation (Greenhalgh, 2004; Ng, 2005; Scully, 2005). The Bathurst CGDN Project had a broad level of community representation from the outset. A Management Committee of nine members was elected from the general Community Website Group membership.

### ***6.5.1 Management Committee***

The Community Website Group Management Group included individuals from many areas of the community. As well as the general business and planning skills identified in the Wollongong Community Website Group Management Committee, Bathurst's Management Committee included individuals with legal expertise. This expertise was useful in negotiating financial and advertising arrangements, developing legal documents to protect the Community Website Group, and providing advice on necessary insurance. It was found to be useful to have individuals with strong links to existing community and government organisations, as well as local knowledge and contacts in the local media. Finding individuals with adequate skills may be a problem in communities that are smaller than Bathurst or located in remote areas as there may not be enough local residents with the required abilities and expertise, and they may also be geographically dispersed.

The members of the Community Website Group must have a range of skills to successfully complete the CGDN application process. Broad membership should therefore be encouraged from the local community. Despite the limited population, the

Bathurst Community Website Group was successful in having members with the required abilities and expertise.

### ***6.5.2 General Members***

Community Website Group members have a broad range of skills which have been well used in the development of the website to date. Members have experience in the following roles:

- Accountants
- Arts, Events and Entertainment workers
- Bank managers
- Business planning, management and operation
- Communications
- Community liaison
- Council and Government representatives (including experience preparing government grants)
- Education providers
- Establishing and managing community organisations
- Health care workers
- Historians
- ICT workers
- Lawyers
- Marketing
- Media
- Spiritual / Religious leaders
- Sporting association participants and organisers
- Tourism operators
- Web developers

Experience in dealing with government funding requests has been extremely useful, and the technical skills of select Community Website Group Management Committee members have simplified the process for other Management Committee members (McCormick, 2005).

**Issue 20: *Skilled Community Website Group members***

The Community Website Group's experiences revealed that having specific skills, experiences and knowledge, such as familiarity with government funding applications, technical skills and media contacts, made the process easier for the entire group. The Bathurst Community Website Group had greater success in these areas than the other test cases.

It was noted that the Community Website Group Management Committee members were extremely busy with other areas of their personal and professional lives (McCormick, 2005; Scully, 2005). This has made it difficult for all members to assign the necessary priority to the project.

**Issue 25: *Presence of volunteer workers***

All individuals working on the CGDN Project were volunteers, and therefore had limited time to commit to the project. This caused delays in progress.

**6.5.3 *Geographical Scope and Boundaries***

Based on the NSW Geographic Names Board's definition of 'Bathurst', the Bathurst CGDN officially only covered a very small area in the centre of the town, which was largely a commercial area. This excluded the majority of residents who lived in the outer suburbs. To overcome this problem the Community Website Group chose to use their local postcode as the membership boundary, which covered Bathurst and all of its adjoining suburbs.

The problems that arose from defining the geographical boundaries from which membership in Wollongong's (see Section 5.5.3) and Bathurst's Community Website Groups would be drawn were resolved by making an amendment to the CGDN Policy in May 2004. This amendment ensured that Community Website Groups could specify their membership boundaries from adjoining address localities, but, at the same time, did not permit a single Community Website Group to apply for all of the CGDNs within those boundaries unless they satisfied the broad representation requirements

**Issue 22: *Shared goals & objectives***

It was essential to agree on a definition of 'Bathurst' to ensure all Community Website Group members understood the boundaries of the CGDN website.

## **6.6 Formation of Legal Entity**

The Bathurst facilitator arranged for a representative of the Office of Fair Trading to explain the three legal entity options (incorporated association, co-operative and company limited by guarantee) (see Section 5.6 for a more detailed explanation) at the second public meeting on February 24, 2004. Based on advice from the Office of Fair Trading, the Community Website Group decided to adopt an incorporated association model, and was fortunate to secure a donation to cover the costs of forming that association.

The Bathurst Community Website Group formed an incorporated association in March 2004 under the NSW Department of Fair Trading Act. The legal name for the group is "Bathurst Community Website Inc." (BCW). While members were generally happy with this choice, some felt they were given "no other option, because time was so limited" (Frost, 2004). To date, the decision to become an incorporated association has been successful and allowed BCW to undertake all planned activities. The roles of the Community Website Group Management Committee were formalised through the establishment of the BCW Management Committee.

The Management Committee consisted of:

- President
- Vice-President
- Secretary
- Treasurer
- 5 general members

There were also five sub-committees established to organise and report on various aspects of the association. These sub-committees were:

- Arts & Entertainment

- Business, Industry & Tourism
- Community & People
- Sport & Recreation
- Technical

In July 2004 a sixth sub-committee was created. The sixth sub-committee was:

- Media and marketing

Prior to that addition, a third public meeting on March 2, 2004 focused on completing all legal papers for the application to become an incorporated association, and discussing the association's Model Rules. The Model Rules for BCW were developed in conjunction with the Wollongong test case, with the two groups sharing ideas and resources to minimise the workload.

**Issue 23: *Governance policies***

Bathurst's Model Rules were used in the creation of appropriate templates for association rules, developed for local communities by ETHOS, with the purpose of being made freely available to all communities completing this process. However, the differences between states, in terms of the legal entities which are allowed, argues strongly for the provision of some different resources on a state-by-state basis, in addition to the common resources.

Subsequent meetings (March 16, March 25 and March 30) involved the election of BCW Management Committee members and the development of policies. The emphasis of the election was on selecting individuals with varied skill sets and a willingness to donate time and effort. All BCW Management Committee places were filled.

A schedule of work activities and reporting requirements was developed in the general meeting on April 13, 2004. This schedule was used to create a timeline which allowed BCW to meet OCOS and organisational goals. This meeting was very successful with members establishing CGDN Project and test case requirements and tasks that were time-lined. Members were assigned tasks to work on, and additional policy and procedural documentation for the organisation to work through on timeframes set by the



group were identified. A full meeting schedule for 2004, with dates and venues, was established, with management committee meetings scheduled fortnightly and monthly general meetings. These meetings coincided with known scheduled activities and workloads for the coming year.

In the Bathurst test case, BCW was the legal entity formed by members of the Community Website Group as part of the CGDN application process. The term 'Community Website Group' will be used to describe the entity in the following discussion, unless differentiation between the **group** and the **legal entity** that corresponds to the group is required.

## **6.7 Membership**

After the incorporation of the Community Website Group entity, individuals who had been attending the public meetings became formal members of the Community Website Group by paying a \$3 membership fee (\$1 joining fee (a legal requirement), and \$2 annual membership fee to the association). Over the subsequent months, Community Website Group members actively encouraged Bathurst residents to attend meetings and become members of the association.

### ***6.7.1 Business Membership***

The Bathurst test case was able to generate significant interest from the business community, in contrast to the other test cases. There are several possible reasons for this. Bathurst is a much smaller and, therefore, a more cohesive community than Wollongong. It may also be because Bathurst did not have a history of unsuccessful commercial "community focused websites". One consequence of this difference is that Bathurst has been able to raise significantly more funds to support the establishment of BCW and development of the website.

### ***6.7.2 Community-wide Membership***

Individuals from many segments of the community were enthusiastic about being involved in the CGDN Project. The membership base included a wide variety of ages

and interests. Meeting attendance dwindled after the first few months, “possibly due to the lack of a live website to back up what we’ve been doing” (McCormick, 2005). About 15 members continued to attend meetings. However, the majority of the planning, development and launch of the website was conducted by a small group of members. While the wider community has not been active in the project, they have continued to give verbal support.

**Issue 14: *Community commitment & contribution***

Attendance levels at meetings fell after the first months. The broader community, including both community groups and businesses, did not become actively involved in the community website development. Members attributed both these issues to the lack of a functioning community website, useful both for promotion of the concept and to legitimise BCW and their requests for funding and support.

**Issue 25: *Presence of volunteer workers***

Possible solutions that were suggested by members to the high demands on the volunteer workers included: reducing the amount of documentation to be completed, providing assistance with realistic planning, recruiting more members to share the workload, and providing communities with more guidance and practical support for website development.

### **6.7.3 *Partnerships***

The Community Website Group placed high importance on establishing partnerships with established community groups. A number of key groups were identified as potential start-up supporters/partners who may be in a position to participate in and support the CGDN Project due to common goals and interests in the form of partnerships or agreements such as Memoranda of Understanding (MOU). One result of such relationships was the provision of a \$500 donation from the Chamber of Commerce. Support has also been offered by the local university, sporting organisations, schools, and youth organisations.

The Department of Education and Training (DET) and Bathurst Regional Council showed initial support through provision of venues for meetings. DET's Central West Youth Connections (CTYC) provided over \$6000 in funding to assist in web development costs and signed an MOU between the Bathurst Community Website Group and CTYC for joint support. The relationship with Bathurst Regional Council has been more complex. After initial discussions about the Community Website Group providing community-based IT services, such as a community directory and events calendar, the Council announced 'Local-e', the next phase in the Council website. Some concerns were raised about 'Local-e' because it appeared to incorporate content and functions BCW was planning to provide. The MOU signed by the Community Website Group and Bathurst Regional Council allows the Community Website Group to link directly to these resources on the Council website, with the Community Website Group and the Council sharing resources and working together for community coordination. Much of the negotiation for the MOU was completed through the Council's IT Manager, who was a member of the Community Website Group Management Committee.

**Issue 31: *Competition with existing local organisations***

Developing and maintaining communication and positive relationships with existing organisations in the community is essential for all CGDN Community Website Groups. Bathurst Community Website Group's existing relationship with the local council allowed them to work with the Council to share resources rather than acting in competition.

Due to the lack of definition of CGDN community website boundaries, there is strong potential for an overlap of functions and content with existing resources. CGDN management needs to be in close contact with existing organisations to ensure there is no duplication of effort.

## **6.8 Moving Forward**

The key issue following the formation of the legal entity was the need to maintain momentum in the Community Website Group. Once again, the facilitator was central to this process until the Management Committee was formed, with the Yahoo! discussion

groups used throughout the planning process to maintain communication between all parties involved.

The Community Website Group secretary assumed much of the responsibility for the project at this time. While there were varying levels of involvement, all Community Website Group Management Committee members participated. The variety of skills and expertise held by the Management Committee was used for relevant tasks. This management, combined with support from the external test case facilitator, was effective in helping to move BCW forward. Over time, it has become apparent that one individual must take ultimate responsibility for the project if it is to be successful (Clancy, 2005; Scully, 2005).

**Issue 10: *Committed Management Committee members***

Responsibility for the Community Website Group was largely assumed by the Group's secretary. In Bathurst, the secretary was a popular and trustworthy member of the group who worked diligently to drive progress. However, in other situations it is not recommended that a single individual is allowed control over documented decisions, publicity or business negotiations. Allowing a single individual full control or responsibility of a CGDN Project has the potential for problems, with that individual's agenda being pushed forward at the expense of the community.

Despite effective internal management, Community Website Group members have been frustrated at the slow implementation of the community website (Clancy, 2005; Ng, 2005). This has been largely due to problems with obtaining the CGDN.

**Issue 3: *Organisational issues within & between auDA & auCD***

Organisational issues led to delays in Bathurst's Community Website Group receiving access to their CGDN. This impacted on the timeliness of the community website being available on the Internet for community use.

Community Website Group members were required to complete extensive planning for the OCOS and CGDN documentation. In 2005, Community Website Group members had varying opinions on whether the planning completed as part of this process was useful for the organisation (Clancy, 2005; McCormick, 2005; Ng, 2005; Scully, 2005).

However the majority of members felt it had been beneficial in some way. Most members believed that the plans were still relevant to their Community Website Group, and suggested that they were useful as a checklist of goals and targets and were often referred to keep the group on the agreed course of action. However, the detail required (e.g. in the Business Plan) was not seen as useful, with members saying it had little relevance to their current situation (McCormick, 2005). More planning on revenue generation would have been useful, as well as developing plans for linking with and representing the not-for-profit segment of the community.

In April 2005, there was consensus that the goals and plans for the organisation were consistent with those recorded during the planning process (Clancy, 2005; McCormick, 2005; Ng, 2005; Scully, 2005). These plans are continually undergoing revisions in response to the Community Website Group's progress.

**Issue 21: *Excessive documentation requirements***

The extensive nature of the documentation, and the volunteer capacity of all other people involved, meant that the facilitator played a significant role in the completion of the documentation. The facilitator's role in completing this documentation is likely to be reduced in future application, due to the consolidated version of the CGDN application to be completed by non-test case communities.

### **6.8.1 *Financial Planning***

The financial plans developed by the Community Website Group indicated an expectation of significant revenue. Potential revenue streams included:

- Grants
- Advertising
- Sale of email addresses
- Sale of fourth-level domains (4LDs) e.g. *sport.bathurst.nsw.au*
- Provision of IT training services

The initial sale prices of advertising space were high – up to \$10,000. After slow uptake, the Community Website Group reduced the prices and were able to sell most

advertising space on the website. Local government and businesses donated resources and funds to the organisation.

**Issue 32: *Unrealistic financial plans***

BCW's initial financial plans, listed in their Business Plan submitted to OCOS, stated that they expected high uptake of the advertising space on their website, despite the very high prices. Planning for website development and broader community ICT initiatives were based on this projected income. These financial plans were revealed to be unrealistic, requiring BCW to spend more resources re-developing their plans.

As Bathurst Community Website Group was the first CGDN Project to develop a financial plan, they did not have any references for realistic financial plans. This may have contributed to the unrealistic figures in their plan.

The funds raised by the sale of advertising space were able to pay for a professional web developer to build the Bathurst community website.

The Community Website Group made a decision to attempt to generate sufficient funding to hire a manager to assume responsibility of updating website content and maintaining the business and community directories in the medium- to long-term, which would overcome the traditional problems associated with volunteering. Sponsorship, advertising, value-added services and general membership fees were proposed to raise these funds. These plans could not be implemented until after BCW had submitted their Domain Name Application (see Domain Name Application) and the website had been launched. Some members believed (at the time of submission) that the projected incomes in the Business Plan were accurate, and that large amounts of money would be raised (Clancy, 2005; Scully, 2005). Others agreed that these avenues of funding would be used, but suggested that these funding streams would simply allow the organisation to be financially sustainable (McCormick, 2005; Ng, 2005).

**Issue 25: *Presence of volunteer workers***

All members of the Community Website Group were volunteers, and had limited time to devote to the community website project. Possible solutions suggested by members included: reducing the amount of documentation to be completed, providing assistance with realistic planning, recruiting more members to share the workload, and providing communities with more guidance and practical support for website development.

**6.8.2 *Banking, Legal and Insurance***

Banking, legal and insurance needs were also highlighted as key issues to be addressed. BCW formally approached a number of local banking providers to establish the best possible service and lowest costs for BCW as well as seeking to establish another local partnership. Once correspondence and interviews with local bank managers took place and responses were received from the banks, the provision of services was narrowed down to two providers. The selected provider charged no fees and included the facility for e-payments and e-commerce when the Community Website Group is ready to explore such options.

The Community Website Group negotiated insurance cover through the NSW Council of Social Services. Management Committee members suggested that auCD should approach the Council to arrange a standard insurance cover for all Community Website Groups managing a New South Wales CGDN. (The requirements for each type of legal entity vary for each state and territory in Australia. Recommendations must therefore be state/territory specific). Due to the financial plans made by the Community Website Group, government regulations required the association to have an Australian Business Number (ABN), and register for Goods and Services Tax (GST) and Pay-As-You-Earn (PAYE). The Community Website Group chose to apply for charitable status which enables donors to claim their donations as tax deductions. The latter has proven to be a particularly lengthy process, with the legal expertise of their Management Committee member used heavily.

**Issue 20: Skilled Community Website Group members**

BCW's experiences demonstrated that having members with legal expertise is a significant advantage. Without adequate legal expertise from a member of the committee, the process of undertaking a CGDN Project and determining the Community Website Group's liabilities is likely to be very difficult.

**6.8.3 Website Planning**

The initial OCOS report was completed in April 2004 by the facilitator and Community Website Group Management Committee members. This report included a web development plan, written by a management committee member with web development expertise.

Upon review of the initial web development plan, the Management Committee decided to hold a one-day web planning workshop in May. Organised by the facilitator, this workshop provided a forum for all interested members to discuss web development and design options and negotiate a detailed plan for the development and implementation of Bathurst's community website. Related legal and insurance issues were also explained at the workshop.

It was at this point that it became clear that a website template would be highly valuable, but at the same time a surge of individual needs that would need to modify any standard template was also clearly apparent. It was at this time decided that, given the limited resources available from OCOS and the community's desire for individuality, a standard website template for the community website would not be developed further.

The original OCOS Model proposed to auDA included state websites to facilitate access to all active CGDNs. Community Website Group members were committed to the development of these state websites, to be used as a tool for all test cases for resource information. A draft state website was developed by the OCOS Project Manager while managing the test cases. Upon public launch, this website was planned to draw together resources provided by the managing organisation (OCOS/auDA/auCD) and those developed by communities that they were willing to share. This state website concept



had been proposed and approved as part of the original CGDN Scheme. However, when auDA and auCD assumed responsibility for the CGDNs, the state website idea was dismissed and it was never launched.

**Issue 28: *Technical implementation***

Test cases were not provided with resources or support for the building of the website. Test case members identified editable web templates, suggested website structures and functions, and advice on selecting a web developer as resources that would have assisted the group to develop and launch their community website in a more timely manner. The provision of basic resources by auDA, and subsequently by auCD, would have significantly eased the strain on Community Website Group members and improved the relationship between the organisations.

**6.8.4 *Policy Development***

A range of necessary policies, procedures and plans were identified, and these were written and approved over a number of months. These included: a partnership policy, legal and insurance policies, a media policy, a marketing plan and a communications plan. All documents were carefully considered by Management Committee members across the Yahoo! group before final approval at Management Committee meetings.

**6.8.4.1 *Marketing Plan***

The Community Website Group's treasurer was appointed as the Group's Media Officer, because she had extensive skills and experience in media and marketing. Initial marketing and media planning was undertaken at a Management Committee meeting. Following this meeting, a number of activities commenced development including an advertising policy, information kits, membership kits, email and web information access points (via OCOS sample website), logo discussions, focus testing of draft websites, website audit of established sites in Bathurst, partnership arrangements, a media schedule for regular coverage in the local media and potential stories based on timelines of the Community Website Group's current committed activities, and membership

drives. The Media Officer was assigned responsibility for coordinating these areas and ensuring consistency in messages and image within the local community.

The media schedule was strictly adhered to, with the first newspaper article featuring the Chamber of Commerce's donation to the Community Website Group. Articles about the Community Website Group's activities appeared regularly in local publications and radio.

A key element of the Marketing Plan was to work with auCD in the development of a unified brand at state and national levels. Recommendations from OCOS and ETHOS included the implementation of state and national websites to bring together all the information about the CGDN Scheme and provide a single access point for all existing community websites developed under the Scheme. The Community Website Group strongly supported this idea, with members believing that a unified marketing strategy to raise community awareness of the CGDN Scheme was essential for its success.

**Issue 12: *National promotion***

The auCD General Manager told the test case members that auCD would conduct a high-profile marketing campaign in conjunction with the national launch to raise awareness of the CGDN Scheme. No such marketing campaign was conducted. Without strong national branding of the name space, each community is forced to use their limited resources to raise local awareness of the CGDN Scheme and their own community website. This was another situation where auCD's input would have assisted communities across Australia. However auCD's involvement did not eventuate, and volunteers were forced to invest their own resources in local campaigns.

The major marketing concern for BCW was that they were not assured ownership of the Bathurst CGDN until their Domain Name Application was submitted and approved. Members were unwilling to commit time or resources to marketing until they were assured ownership of the new domain name (McCormick, 2005), so the group chose to limit their promotion of the website until ownership had been granted. The full Marketing Plan was implemented as soon as the domain name was made available (Clancy, 2005).

#### ***6.8.4.2 Business Plan***

Business plans and revenue models were highlighted as essential to be developed and completed for short-, medium- and long-term planning to meet the range of goals of the organisation and the website. An initial audit of local websites was conducted to identify a niche that could be filled in the area of local Bathurst resources online.

#### ***6.8.5 Supporting BCW Members***

The Management Committee decided to create a BCW Membership Handbook for all members. This Handbook contained details about BCW and the CGDN Scheme, contact details for key individuals (such as management committee members and sub-committee leaders), a meeting schedule, and copies of key policies and the association's rules. Instructions for the use of the members' Yahoo! discussion group were also provided. In addition, an email enquiry line was established and the coordinator of this email was one of the web development and IT specialists on the committee, with 24 hour email access.

#### ***6.8.6 Using Local Skills***

Community Website Group members determined that a logo was necessary for their association and website. Members deliberated over holding a local competition, however decided that it was more effective to pay a professional designer. All local designers (from within the membership area) were contacted with a request for tender to develop the BCW logo, and were asked to submit a draft example designs for the logo. Members used these submissions to select a local designer to create the BCW logo.

### **6.9 Domain Name Application**

In May 2004, the Community Website Group was given access to the online Domain Name Application (see Domain Name Application), which each test case community was required to complete. Access was established for numerous Management Committee members, allowing each of these people to work on the Domain Name

Application whenever it was convenient for them. The Bathurst Community Website Group took two months to complete their Domain Name Application. During this time, many facilities provided by the Yahoo! group, including the discussion list, file sharing, and calendar, were heavily used. The Community Website Group found it most successful to allocate the responsibility for each section of the Domain Name Application to a single person, with that person sourcing information and support as required.

The policies, procedures and plans that members had prepared prior to starting the Domain Name Application minimised difficulties associated with completing the necessary documentation.

The initial application process was too time-consuming, and is likely to deter future communities unless it is streamlined (Clancy, 2005; McCormick, 2005). However, it is important to ensure that applicants are committed and are capable of producing a high-quality website (Scully, 2005).

**Issue 26: *Limitations imposed by auDA / auCD***

While test case members were insistent that Community Website Groups should have to demonstrate that they had engaged with the local community, members found the documentation time consuming to complete. The time and resources required to complete the compulsory documentation is likely to deter communities from applying in the future unless it is streamlined.

**Issue 27: *Community Website Group planning***

The members of the Community Website Group were required to develop detailed plans for the group and its website. Members found this requirement to be excessive prior to being given ownership rights to the domain.

## 6.10 Website Vision

BCW recorded the following as their website vision:

“To provide a single point of entry for online information about Bathurst, its business and tourism opportunities, services for residents, community groups and other information. The site will be informative, up-to-date, inclusive and service orientated. The Bathurst Community Website Inc. through its vision to create a single point of entry for Bathurst online will also seek to facilitate getting Bathurst community groups, businesses and others online.” (Bathurst CGDN Project, 2004)

BCW’s plans were based on this vision, with partnerships established to make the vision achievable.

## 6.11 Website Development

At the public meetings, Community Website Group members were encouraged to participate in decisions about the design of the website. Many decisions were made by sub-committees, each of which was led by a Management Committee member (Clancy, 2005).

Interaction between members was facilitated using a Yahoo! discussion group. While this facility was extremely useful for members, it did not allow for participation from the broader community.

### **Issue 17: *Communication mechanisms***

Despite efforts to involve the broader Bathurst community, there were limited opportunities for community members to participate if they were not BCW members.

Members of the Community Website Group were keen to begin website development as soon as possible. However, the facilitator insisted that the Community Website Group members complete at least draft plans before doing so, because it was believed the content of the community website in the first 12 months after launch has a significant

impact on the long-term success of the website. Management Committee members indicated that the requirement to plan before building the website had resulted in a more focused website than they would have developed initially. The time spent planning also allowed them to speak with community members about their expectations, locate existing resources and determine the most effective way to utilise these resources so local content was not duplicated.

#### ***6.11.1 Community Website Design and Development***

A significant amount of the website design and development planning was conducted at the workshop (discussed in Website Planning, Section 6.8.3). Design ideas were proposed by the facilitator and Community Website Group Management Committee members, based on research into existing community websites. Management Committee members discussed the alternatives and developed a layout and website structure. This was used as the basis of subsequent website development.

The Community Website Group chose to employ a professional web developer to build the community website so that it appeared professional and could be developed quickly. After a tender process, a local web developer, who was also a member of the Management Committee, was chosen. Community Website Group members believed it was essential for the web developer to be in close contact with the Management Committee. One of the requirements of the website was that it could be easily maintained by members of the Community Website Group after initial development (McCormick, 2005). Development began in early 2005. By April 2005, the initial design was complete and content was being entered. The community directory was completed in June 2005, and the categories and menu items finalised. The majority of the content on the Bathurst community website was researched and compiled by Community Website Group members due to limited financial resources. Members found it difficult to adhere to the schedule for entering website content, because all were working in a volunteer capacity and they did not have large amounts of time to commit to the project. Therefore, despite the initial website being completed quickly, there were significant delays caused by the lack of content.

**Issue 18: *Viable level of funding***

The lack of paid staff, due to limited financial resources, slowed the process of website development.

**6.11.2 Website Structure**

The structure of the website was negotiated at the Web Planning Workshop, attended by the majority of the Community Website Group Management Committee members. At the time of launch, the community website contained the following six sections:

- Arts and Entertainment
- Business and Industry
- Community and People
- Employment and Education
- Sport and Recreation
- Tourism and Events

These six areas are loosely correlated with BCW's six sub-committees. Each of the sub-committees assumed responsibility for obtaining and entering the necessary content.

**Issue 18: *Viable level of funding***

The lack of paid staff, due to limited financial resources, slowed the process of website development.

At the time of launch, the community website also contained the following features:

- Search facility
- Local weather
- Online payments for membership and advertising
- About Us
- FAQ
- Web-based email for Community Website Group members

### ***6.11.3 Development Software***

After investigating open source products, members decided that they did not have the resources to build a community website themselves. Instead, they preferred to pay a professional to develop the website and have it available to the community sooner. The website developer used his own software, and the website allows members to log in to the system and make content changes as necessary.

## **6.12 Content and Functions**

The Bathurst Community Website Group employed the services of a professional web developer, and was therefore able to implement a dynamic, database-driven website. This allowed the implementation of business and community directories that were easy to manage and update. The business directory is considered to be an important function on the Bathurst website, and seeks to support the local business community in return for the sponsorships, grants and partnership arrangements that local businesses have with the Community Website Group.

The Community Website Group is also collaborating with the Bathurst Regional Council on the 'Local-e' project to develop the website's functionality (see Section 6.7.3). The Community Website Group's web developer and an officer from the Council are working in collaboration to implement various 'Local-e' Internet tools on their websites, thus avoiding unnecessary duplication. This type of collaboration with other CGDN Projects through the 'Local-e' project could be a viable option for other rural and regional councils in New South Wales.

Other functions such as calendars, chat rooms, forums and email were all suggested. Initially, members were keen to provide a high level of functionality but this was tempered by three major considerations: liability, technical issues and cost. BCW has chosen to implement these functions in a phased approach to minimise the demands on Management Committee members at any particular time.

The Community Website Group found it difficult to estimate the hosting requirements of the website. This was due to their plans to develop and host web pages for numerous local businesses, and not knowing how many hits to expect on the community website



after launch. This issue was addressed by having a host for a period of three months initially, and then reviewing the statistics and seeking more permanent hosting. The initial host was based in Bathurst. This company was retained after the initial three month contract.

**Issue 29: Infrastructure**

Determining infrastructure requirements was difficult because the Bathurst Community Website Group had documented many plans in their Domain Name Application, but were unsure of the resources they would have to complete these plans.

The following functions were considered to be necessary at the time of launch:

- Calendar – populated with information from Bathurst Regional Council and submissions from community members. Initially the calendar contained many current events. By 2007, the calendar did not contain any events.
- Directory – contained details of local business and community groups. It was decided to combine the business and community directories because some organisations crossed both categories. A member of the management committee manually entered all details into the directory prior to the launch. Businesses and community groups are able to submit and update their details online. Business received a basic listing for free, with the option to pay for a more prominent advertisement. Community groups received an enhanced listing for free.
- General information about BCW and the community website – A brief overview of the CGDN Scheme, OCOS and BCW is provided.
- News – Bathurst Regional Council allowed the Community Website Group to use their press releases on the website.
- Local information – weather and map information were provided.

Other functions that have been considered by the Community Website Group but have not been implemented include:

- profiles of community members (changed and updated regularly)
- classified advertisements
- online voting on local issues and functions

- interactive features such as chat rooms, weblogs, web-based email for community members, and discussion lists

### ***6.12.1 Legal Considerations***

The implementation of many of the functions listed above has been delayed due to issues of legal liability. The Community Website Group wished to investigate possible legal ramifications and minimise liability prior to implementation.

Questions were raised about the liability of the group for comments made on a forum – would the Community Website Group be liable if these comments were defamatory? Similarly, questions arose about attachments in email, images displayed on bulletin boards and so on. This in turn often led to a discussion of the liability for content on other sites to which the community website was linked.

Bathurst had members with a legal background who were able to provide informed responses to these questions. The management committee, with legal advice, developed a Disclaimer (Bathurst Community Website Inc., 2006a), Terms of Use statement (Bathurst Community Website Inc., 2006a), and Privacy statement (Bathurst Community Website Inc., 2006b). See **Appendix I** for full documents.

#### ***Issue 2: Coordinated support for Community Website Groups***

Standard legal documentation should be provided to all Community Website Groups by auCD to reduce the demands on Community Website Groups' limited resources. It would be extremely useful if these issues could be resolved and included in a "How To" kit.

#### ***Issue 20: Skilled Community Website Group members***

BCW members were concerned that the association may be liable once their website was launched. The inclusion of a lawyer in the Community Website Group was valuable for legal advice.

**Issue 25: *Presence of volunteer workers***

Members devoted extensive time and resources to the development of a Disclaimer, Terms of Use statement, and Privacy statement for use on the website.

**6.12.2 *Community Representation***

Community Website Group members were concerned that community groups which did not have an existing website would not be represented on the community website. There were discussions about how the Community Website Group could support such groups. The Community Website Group plans to provide a service to develop and host basic web pages for local community groups, in conjunction with local educational institutions. Negotiations with the educational institutions are ongoing.

Some segments of the community do not have an existing web presence and lack familiarity with the Internet. To ensure full community representation, extra support is required to assist these organisations. This places further demands on the limited resources of the Community Website Group.

**Issue 15: *Mechanisms for maximising community involvement***

The Community Website Group decided to assist the community groups with an existing web presence, to build social capital and maximise community representation.

**6.12.3 *Community Exclusion***

There was an expectation that website content ought to be inclusive of the whole of the community. Community Website Group members discussed the impact of accepting *all* members of the community, including groups such as sex shops and bookmakers, which some members of the community find offensive or immoral. The Bathurst Community Website Group has resolved this issue by deciding to allow these organisations to be listed in the business directory only (which would also include an adult rating where appropriate). There will be no direct link on the community website to these organisations, and the Community Website Group reserves the right to refuse website development and hosting to any organisations. This ensures that these types of

businesses are not excluded from the website, but at the same time protects children from exposure to adult content.

**Issue 13: *Broad community representation***

Community Website Groups struggled to balance the requirement of full community representation with the desire to provide an inoffensive website that was suitable for use by all members of the community. It is a concern that some community websites may therefore not be representative of all sections of the community, and some Community Website Groups may use this excuse to inappropriately exclude sections of the community.

While decisions on appropriate content must be made for each Community Website Group, it is recommended that auCD provides general guidelines to support communities as they complete this process.

**6.12.4 *Fourth-level Domains***

One method of generating income and traffic that was considered by the Community Website Group was the sale (or lease) of fourth level domains (4LDs) to local organisations and businesses. For example, *tourism.bathurst.nsw.au* may have been leased to the local tourism organisation for a small fee. This would raise money and increase awareness of the community website. The Community Website Group also considered more specific 4LDs linked to business names.

The Community Website Group Management Committee was in the process of developing rules for the sale and use of the 4LDs, in conjunction with the Wollongong Community Website Group, when auCD decided that they did not want communities to be able to sell or lease 4LDs.

auCD's move to restrict the use of fourth levels domains (4LDs) (e.g. *music.bathurst.nsw.au*) (see Section 4.10) impacted on the Community Website Group's financial plans, removing a planned revenue stream. Discussions between Bathurst Community Website Group and auCD did not result in a satisfactory explanation of the reason for these restrictions.

**Issue 5: CGDN Policy modifications**

After assuming control of the CGDN Scheme, the auCD General Manager chose to make numerous changes to the CGDN Policy. These changes forced the Bathurst Community Website Group to alter plans they had spent much time developing, which wasted the group's limited resources.

## **6.13 Managing and Launch**

### ***6.13.1 Problems and Delays caused by auCD***

The public launch of the Bathurst community website was delayed due to auCD planning and requirements. Despite claims from auDA in early 2004 that the CGDNs would be publicly launched in late 2004, the Bathurst Community Website Group was not given access to their CGDN until 2006. As explained in Section 4.10, policy, technical and administrative issues contributed to these delays. Community Website Group members expressed frustration at the situation (Scully, 2006a) – they believed that auDA and auCD were unwilling to listen to the experiences and knowledge of the communities, thereby extending the delays as the auCD General Manager repeated research, planning and development already conducted by the test case communities. Some members left the group during this period of delays, because of the inaction.

**Issue 3: Organisational issues within & between auDA & auCD**

Organisational issues within auDA and auCD caused delays for the Bathurst Community Website Group. The test case faced the challenge of maintaining community awareness of and interest in the CGDN during these delays.

**Issue 30: Communication between auCD and Community Website Group**

Community Website Group members believed that the auCD General Manager ignored feedback from the test case.

Community Website Group members were also opposed to the concept of using national sponsors (see Section 4.8), rather than assisting communities to work with local organisations to maintain the 'local' focus on each CGDN. Members of the Community

Website Group had joined the CGDN Project on the basis that it was a ‘local’ project – all content was to be local, for local people, with the benefits going to the local community. When auCD assumed responsibility for the project, the local focus was not maintained, with auCD soliciting sponsorship from a national company. Community members were disappointed and angered by the arrangement with the national sponsor, and the auCD resources invested in securing this sponsor. They believed these resources should have been used to promote the CGDN Scheme, thereby assisting each community to gain local sponsors.

The allocation of a temporary domain name in the org.au space (bathurstnsw.org.au) allowed the Community Website Group to conduct a local launch of the website and receive community feedback. However, it appeared to confuse locals. The Community Website Group did not actively promote this temporary domain name in an attempt to save funds. Community Website Group members stated that the allocation of the temporary org.au domain, in conjunction with the release of geographic names in com.au and net.au, had a negative impact on the community website and detracted from sales of directory listings. When the release of geographic names in com.au and net.au was proposed by auDA, Community Website Group members actively voiced their displeasure and made formal submissions to the auDA Review.

**Issue 3: *Organisational issues within & between auDA & auCD***

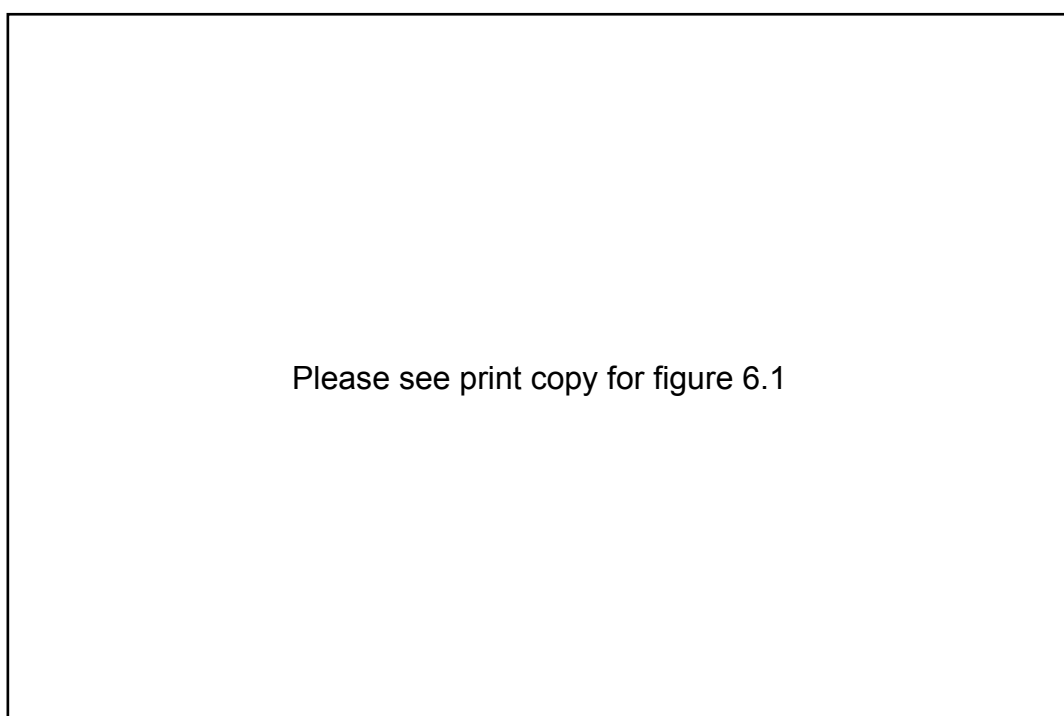
The test case faced the challenge of maintaining community awareness of and interest in the CGDN, while not wasting resources promoting a temporary domain. Communities applying for CGDNs in the future are unlikely to face this problem.

The major viability issue identified by the BCW members was exclusive access to the geographic names in com.au and net.au. The group believes that it is likely that the community name will not be viable if serious commercial competition develops in competing name spaces (see Section 4.12) (Clancy, 2005; Ng, 2005; Scully, 2005).

While Community Website Group members still supported the CGDN Project throughout the development and launch planning, some noted that motivation was generally quite low due to the extended delays caused by auDA and auCD. See **Chapter 4** for further discussion of issues related to delays caused by auDA and auCD.

### ***6.13.2 Local Launch***

The Community Website Group held the local launch of their community website (see Figure 6.1:) on April 7, 2006. Bathurst Regional Council provided the council meeting room, and the website was officially launched by the Mayor of Bathurst, Councillor Norm Mann. Representatives from the Council, media, community groups, OCOS and the Wollongong Community Website were in attendance.



*Figure 6.1: Bathurst CGDN website, April 18 2006*

### ***6.13.3 National Launch***

The national launch of the CGDN Scheme was held on August 8, 2006 in Sydney. A member of BCW was invited and accepted the offer to make a presentation on how BCW is working to keep their community website relevant, fresh and active.

Community Website Group members were concerned that the success of their website was closely tied to the success of the namespace generally, and that national promotion of the CGDN Scheme had not been adequate. Despite plans for an extensive national

promotion campaign to coincide with the national CGDN launch, this did not occur (see Section 4.13). Without a coordinated marketing campaign by the managing body (auCD), it is likely that the CGDNs will achieve high awareness or use.

**Issue 12: *National promotion***

Awareness of the CGDN Scheme is essential for its success. Community Website Group members were concerned that this awareness was not achieved due to the lack of national publicity conducted by auCD.

## **6.14 Medium-term Vision**

The BCW vision for the first one to three years after launch (the ‘medium-term’) was to:

- implement all planned functionality that had not been achieved at launch
- expand membership
- develop long-term revenue streams that allow BCW to be self-funding, and
- build relationships and partnerships with key local organisations.

### **6.14.1 Functionality**

Essential functionality that the Community Website Group plans to implement is to allow community feedback via the website. The purpose of the website is to meet community needs, and to achieve this purpose, the Community Website Group must be in tune with the needs of the local community at all times. All interactive features that were initially proposed were delayed because of possible legal issues (see Section 6.12.1). These issues have not yet been addressed.

Community Website Group Management Committee members have assumed responsibility for regularly updating content on the website. Plans to include current content such as sporting scores have not come to fruition. Without extensive community involvement or a paid manager, the demands of regularly updating content are likely to lead to volunteer exhaustion in the medium-term. Increasing community involvement is ideal because it builds commitment to and ownership of the website. However, issues of



information accuracy must be addressed if community members are able to directly update the website content.

The Community Website Group is working to demonstrate value added benefits to the wider community. These benefits may be in the form of promoting the area to tourists and visitors, advertising local businesses, and partnerships with local organisations. All of these benefits would lead to an increase in social capital in the long-term, as the community rallies around the Community Website Group and the website. It is important to cater for as many diverse community groups as possible in the long-term, as well as external visitors.

#### ***6.14.2 Membership***

The Community Website Group recognises that it is essential for the membership base to retain and extend the skills held by members (see Section 6.5.2). The membership base expanded significantly after the local launch of the website. Ongoing promotion of the website in the local community has been successful in recruiting locals, maintaining membership numbers and bringing new ideas to the group. The Community Website Group is aware that more active recruitment will be necessary in the next few years, as the formation members leave the group.

The concept of succession planning has been discussed, however no actual plans have been developed. Community Website Group members are working to develop and extend their policies, procedures and plans to minimise disruption should key individuals leave the Community Website Group. The plan to employ a part-time administrative assistant was developed to minimise the likelihood of volunteer exhaustion.

#### ***6.14.3 Funding***

The Community Website Group's initial financial plans included the expectation that the Group would be able to raise enough funds to employ a part-time administrative assistant to manage the community website. The Community Website Group was not

able to raise significant funds to employ permanent staff in the medium-term. All website management was therefore completed by volunteers.

Detailed business and financial planning has been completed, with success in selling advertising space on the website. However, despite Bathurst's success, they have had difficulty obtaining funding and developing revenue streams that will be able to support the long-term plans of the organisation. Limitations on the use of 4LDs imposed by auCD just before launch have had a negative impact on the Community Website Group's financial position. Due to limited funds raised, the Community Website Group has delayed developing larger-scale projects such as IT training in the local community. The Community Website Group is working towards being self-funding, and not having to rely on one-off sponsorships, grants and donations.

**Issue 18: *Viable level of funding***

The Bathurst Community Website Group have been unable to raise enough funds to implement their medium-term plans originally outlined.

#### ***6.14.4 Partnerships***

The Community Website Group has developed medium-term partnerships with key local organisations, such as the Bathurst Regional Council and Central West Youth Connection to enhance their reputation in the area and provide a greater level of stability to the project. Management Committee members are continuing discussions with these organisations about providing IT resources and training to the local community in the long-term.

### **6.15 Post-Launch Experiences**

The viability of the Bathurst community website was seen to depend on a number of factors (Scully et al., 2006):

- Community interest after launch
- On-going commitment from local stakeholders
- Maintaining a variety of skills within the management team and wider membership base

- A sufficient level of funding to pay for website maintenance
  - While BCW had originally preferred not to include advertising on the website, after launch it was seen as necessary for financial survival
- Competition from com.au and net.au geographic domain names

Since launch, these issues have been the main concern of BCW members. Continued attempts to develop links within the community and raise finances have had limited success. The members of the Community Website Group that were involved in the website development remain committed to the CGDN website, and maintain the events calendar. Few other changes have been made to the website since its public launch.

The facilitator in the Bathurst test case was the driving force in its success in the early stages – without her dedication to the CGDN Project, the progress of the community group formation, completion of documentation and websites development would have been much slower. After the facilitator was no longer directly involved, and particularly after the local launch (at which time the facilitator was not engaged with the CGDN Project in any way), the growth of the community website and related community-related developments slowly significantly. It is evident that the enthusiasm, dedication and community contacts of the original facilitator were integral to the success in Bathurst.

## **6.16 Reflection**

The Bathurst test case was the most successful of the three at involving the local community in the CGDN process. Community members were enthusiastic about the idea generally and the CGDN Scheme specifically from the time of its introduction, and this enthusiasm was maintained. The facilitator's deep understanding of and engagement with the community allowed her to establish contact with a large group of key individuals within the local community and engage with the existing community groups. This process was supported by the facilitator's experience with community engagement projects, and her proactive approach to the website. The facilitator played a significant role in the success of the Bathurst test case; it can be assumed that a facilitator with fewer established links in the community would have been less successful at engaging key community members in the community website.

As a result of her experience with other community projects, the facilitator guided participants through extensive planning (much of which was mandated by the CGDN Scheme). While participants found this process tedious at the time, this planning informed much of the success of the community website within its first 18 months. The Bathurst test case completed the most extensive planning of the three test cases, and was the most successful at website development and on-going community engagement; this planning appeared to at least partially contribute to the test case's success.

Many of these high profile individuals became active members of the managing group; others promoted the concept to the community (essentially providing free publicity). Having high profile community members involved in the project provided the group with greater access to funds from a variety of local sources. These funds were used to pay for web development costs, reducing the overall burden on members and allowing for the launch of the website to be conducted much earlier than if it had been completed on a voluntary basis. Without access to this funding from the local community, the website development process would have been significantly delayed.

The majority of Bathurst community members have a 'small town' mentality which was integral to the success of the community website. Community projects in the Bathurst area commonly experience high levels of participation, and voluntary participation in community projects is highly respected. Therefore, while there was no direct financial compensation for participation, these community members were rewarded with community respect. The relatively small size of the community (about 37,500 people) and shared cultural background of the community members provided a foundation of common expectations upon which participants started negotiating community website inclusions. The geographical isolation of Bathurst (compared to the physical location of Wollongong) meant that community members had shared perceptions of the physical area encompassed by 'Bathurst', and hence shared perceptions of the people and community activities that should therefore be represented on the community website.

The large website management group that was established, and was maintained throughout the process, allowed the extensive workload of the community website group to be shared. It also meant that the group maintained a broad skill base, which

informed the extensive and creative planning undertaken by the group. Because most participants were engaged in multiple community projects in the local area, this provided opportunities for informally obtaining community input and for the broader community to ask questions about the project and ensure accountability was maintained.

## **6.17 Conclusion**

Difficulties experienced by the Bathurst test case were minimal. A strong facilitator and broad community support were integral to the development of the Bathurst CGDN website. While significant progress has not been made since the website launch, the BCW members have remained committed to the CGDN website, and they are hopeful of obtaining resources in the near future, which would allow them to employ someone to maintain and continue to build the community website. The majority of the problems experienced in the test case were external: changes to the CGDN Policy influencing planning, a lack of support from auDA and auCD and extended delays before gaining access to their CGDN. This chapter has described and analysed one approach to developing a community website, developing a deeper understanding of issues faced by groups developing community websites (*research goal iv*). In conjunction with the description and analysis of two other approaches to developing a community website in **Chapters 5 and 7**, and the summary comparison provided in **Chapter 8**, this chapter has also addressed *research goal ii*.

## **Chapter 7: CGDN Project 3 – Ballarat**

### **7.1 Introduction**

Ballarat is a large country city in regional Victoria with over 88,000 residents (City of Ballarat, 2006b). Originally a mining and agricultural centre, Ballarat's key industries are now education, manufacturing and tourism (City of Ballarat, 2006b). In recent years, the city has focused its efforts on encouraging its emerging information and communications technology industry.

The Ballarat community was first introduced to the Community Geographic Domain Name (CGDN) scheme in early 2004. Facilitated and managed by the cBallarat organisation, the test case experienced a range of difficulties, which are discussed in this chapter. As a result of these difficulties, significant progress on the community website was not made until a new manager was appointed in mid 2005.

This chapter describes the facilitation arrangements for the Ballarat case study, and the implications of this facilitation style. The process used to inform and involve the community, and develop a CGDN Steering Committee is discussed, followed by an explanation of the legal arrangements used to satisfy the CGDN Policy. A brief discussion of the documentation, website planning, and web development for the website is provided. The chapter concludes with a description of the website launch and post-launch experiences.

### **7.2 Facilitation**

The Ballarat test case was initiated by cBallarat (.au Community Domains, 2006a), a not-for-profit company based in Ballarat. cBallarat seeks to promote Information and Communication Technology development in the Ballarat Region, linking community projects with funding organisations (cBallarat, 2006a). A cBallarat employee was responsible for managing the test case.

Both the Wollongong and Bathurst test cases formed new Community Website Groups, and all decisions were made by the Management Committee of those Community

Website Groups. In contrast, Ballarat provided an opportunity to observe a CGDN Project being a sub-unit of an *existing* not-for profit organisation. This arrangement was considered by auDA when writing the CGDN Policy, because many smaller communities already have technology working groups (such as Community Technology Centres (CTCs)) and auDA believed there may be value in allowing those groups to manage the community website. Ballarat provided an opportunity for such “joint ownership” issues to be explored.

A Steering Committee was formed in Ballarat, rather than a Management Committee as in the other test cases. The Ballarat Steering Committee provided recommendations on decisions affecting the Ballarat CGDN, however ultimate authority remained with the cBallarat Board.

### **7.2.1 Facilitation Problems**

When cBallarat submitted a proposal for CGDNs to auDA in 2002 (ballarat.vic.au, 2006a), and when they accepted responsibility for the Ballarat CGDN Project, the cBallarat Executive Officer was the driving force. However, by April 2004 when the CGDN Project began, another staff member had been appointed responsibility for the facilitation. Meetings with the cBallarat staff members and feedback from Steering Committee members indicated that the cBallarat staff member facilitating the CGDN Project was responsible for numerous projects at cBallarat, and had little time to commit to the CGDN Project. Many Steering Committee members felt that they had been abandoned (Hotchin, 2004; Thompson, 2004; Hotchin, 2005), and that no progress was being made. The Steering Committee suffered from a lack of clear leadership.

#### **Issue 9: Effective facilitator**

The lack of active leadership resulted in the community website making slow progress, and a lack of enthusiasm from the Steering Committee members.

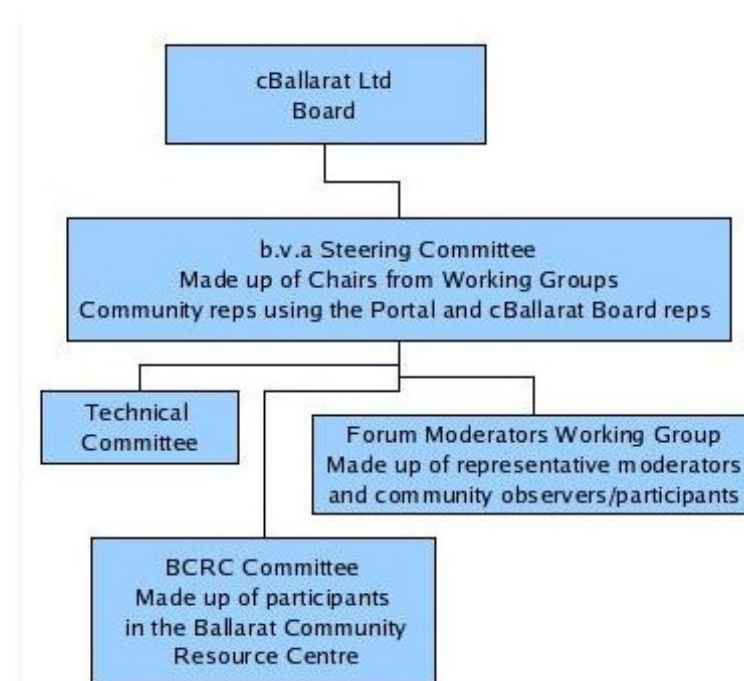
In February 2005, the cBallarat staff member facilitating the CGDN Project left cBallarat giving little notice to the CGDN Project Steering Committee. Upon her departure, Steering Committee members lost access to all documentation that the facilitator had developed and all meeting minutes.

### **Issue 33: Management succession planning**

Communication between the facilitator and members must be maintained. Communal access to documentation (e.g. via a Yahoo! group) ensures information is not lost if someone leaves the group.

By early 2006, the cBallarat Executive Officer had again assumed responsibility for facilitation and the community website had become “a lead initiative” for cBallarat (Parkinson, 2006b; Thompson, 2006).

Due to the nature of the cBallarat management arrangement (see Figure 7.1, (ballarat.vic.au, 2006c)), the Steering Committee had little control over major decisions relating to the community website. The proposed structure for the Ballarat community website management is shown below. The Working Groups have not been active to date (ballarat.vic.au, 2006c) due to the small number of participants.



*Figure 7.1: Management Structure of Ballarat CGDN Project*

The Ballarat CGDN Project Steering Committee is viewed as a Working Group of cBallarat (ballarat.vic.au, 2006c). As shown in the figure, cBallarat Board representatives are members of the Steering Committee. All decisions made by the



Steering Committee are then taken to the cBallarat Board meetings for approval. This process has caused delays and reduced the community control of the website.

**Issue 13: *Broad community representation***

Due to the hierarchical management structure of the Ballarat CGDN Project, the cBallarat Board made all final decisions relating to the CGDN website, rather than the community members making these decisions. This situation is in direct contrast to the CGDN Policy.

**Issue 4: *CGDN Policy poorly enforced***

The deviations from the CGDN Policy by cBallarat were not addressed by auDA and auCD.

The other significant problem encountered by allowing cBallarat to facilitate and manage the Ballarat case study was the cBallarat had close ties to local council. cBallarat is owned and managed by the City of Ballarat, and the Director and Chairman of the cBallarat Board is the Chief Executive Officer of the Ballarat City Council (cBallarat, 2006b; City of Ballarat, 2006a). The City of Ballarat is publicly identified as a key sponsor (cBallarat, 2006c) and provides the majority of funding (cBallarat, 2006a) for cBallarat. This strong support from local council was used as justification for that claim by the auCD General Manager that Ballarat were the “lead [test case] community” in March 2006 (Scully, 2006a).

**Issue 34: *Independent managing body***

cBallarat has close ties to the local council. The Chairman of the Board is employed by Ballarat City Council, and cBallarat receives significant funding from all levels of government. While the CGDN Policy encourages local council involvement, a Community Website Group must include “representative members from a broad cross-section of the local community” (auDA National Reference Group, 2004) to be eligible to register a CGDN. The Ballarat Project does not meet this requirement.

**Issue 35: *Trust and loyalty***

Steering Committee members and members of the Ballarat community experienced difficulty trusting cBallarat with the CGDN Project management. cBallarat's relationship with the local council, changes in facilitator and lack of consultation with community members raised questions about cBallarat's loyalty to the community and the community focus of the CGDN Scheme.

### **7.3 Introducing ballarat.vic.au to the Community**

#### **7.3.1 *Informing the Community***

The Ballarat community was informed about the community website idea and a meeting to discuss the proposal through the local media. The cBallarat facilitator also identified a small number of key local stakeholders who were likely to have an interest in the CGDN website. These stakeholders were personally invited to the meeting through telephone or email contact.

#### **7.3.2 *Holding the Public Meeting***

On 5 April, 2004 the public meeting to discuss Ballarat's proposed CGDN Project was held in the Ballarat Town Hall. There was strong attendance at the meeting (over 30 people). The facilitator suggested this was largely because people wanted to determine whether the community website would create competition for their existing schemes (Angeloni, 2004c).

Since this meeting in April 2004, no further public meetings have been held.

**Issue 24: *Community consultation***

The lack of public meetings has severely limited opportunities for community consultation.

**Issue 4: CGDN Policy poorly enforced**

CGDN Policy states that membership of any Community Website Group (or in the case of Ballarat, the Steering Committee) should be open to all community members. The deviations from the CGDN Policy by cBallarat were not addressed by auDA and auCD.

## **7.4 Committing to the Project**

A 12 member Steering Committee was formed from the attendees of the public meeting. All other community members who attended the meeting were uninterested in contributing to the CGDN Project. Only five of the members of the Steering Committee were still actively participating by August 2004 (4 months after formation) (Angeloni, 2004c).

### **7.4.1 Community Representation**

While the CGDN Policy states that the Community Website Group (in Ballarat this was equivalent to the Steering Committee) “members must represent a broad range of community interests and groups” (.au Community Domains, 2006b; .au Community Domains Trust, 2006a; .au Domain Administration, 2006c), the Ballarat facilitators made little attempt to comply with this requirement.

The Ballarat Project experienced difficulty obtaining strong community support due to numerous failed web projects in the past. This was especially true when attempting to encourage business involvement. One member of the Steering Committee (guided by the first facilitator) stated in August 2004 that the 5 core members of the Steering Committee would develop and implement the website, and only after the website was live would they attempt to develop further support from the local community and actively recruit new members who could add content to the site: “it is pointless to try to get people involved when all we really want from them is content, and we don’t have a website to put the content on yet” (Hotchin, 2004). This view was supported by the second facilitator in early 2006 (Parkinson, 2006b). Between the formation meeting in April 2004 and August 2007 no further community consultation was conducted.

**Issue 14: *Community commitment & contribution***

Difficulty obtaining community involvement may be due to numerous failed web projects in the past.

**7.4.2 *Internal Communication***

Due to the apparent lack of communication between interested parties and Steering Committee members in Ballarat, the OCOS Project Manager (based in Bathurst, NSW) established a Yahoo! group for the members of the Ballarat Steering Committee. Unlike the Wollongong and Bathurst Community Website Groups, the Ballarat Steering Committee did not regularly use the Yahoo! mailing list or document storage capabilities. Sporadic emails were used by members to communicate. All documentation was kept by the facilitator, which resulted in difficulties for the committee when the facilitator left unexpectedly without handing over these documents.

**Issue 17: *Communication mechanisms***

The communication mechanisms provided were not used effectively, leading to a break down in communication between members and the facilitator.

**7.4.3 *OCOS Reporting***

Communication between the Ballarat group and the OCOS Project Manager was also limited. The Ballarat facilitator often did not participate in the regular test case teleconferences held with other test cases or complete the required weekly reports (see Weekly Report Template) (McGuire, 2004d; McGuire, 2004c), and email communication was limited. Feedback from Steering Committee members in April and August 2005 identified many misunderstandings (Hotchin, 2005), which appeared to be due to a lack of information from their facilitator.

**7.4.4 *Meetings***

Meetings were held on an irregular basis. All meetings were conducted at the cBallarat premises (Angeloni, 2004c). Some Steering Committee members believed that both the facilitators' unwillingness to meet in a more neutral location was a reflection of

cBallarat's plan to control the entire CGDN Project. One Steering Committee member said "I withdrew from the committee after donating significant of my own time to a fruitless exercise." (Hotchin, 2005). The majority of people involved believed that meetings were unproductive and made no progress.

#### **7.4.5 Resources**

cBallarat provided almost all resources used in the planning and development of the CGDN website, with Ballarat City Council donating funding to pay for some of the initial development costs (Angeloni, 2004a). However, the amount of time the cBallarat facilitator had available to contribute to the CGDN Project was limited. cBallarat also viewed the CGDN website as a commercial exercise and expected to recover all costs after launch through membership and sponsorship (Angeloni, 2004a). This perspective is in direct contrast to the CGDN Policy (.au Domain Administration, 2006c).

### **7.5 Community Website Group**

#### **7.5.1 Steering Committee Skills**

The skills that the 12 Steering Committee members had were varied, with a wide cross-section of both technical and non-technical skills. However, when reduced to 5 members, the Steering Committee's skill base was not as diverse as required for a successful Community Website Group. The small number of people involved was justified by a cBallarat facilitator with the comment "The bigger the management/steering group, the slower and more cumbersome the process becomes" (.au Community Domains, 2006a). The skills of the remaining members included:

- Website design skills
- Technical skills
- Business and marketing skills
- Management abilities

All individuals in the Steering Committee were in the information technology field. Initially, the Steering Committee also had:

- Legal expertise
- Promotional and media management skills

Again in Ballarat, it was found to be useful to have individuals with strong links to existing community and government organisations, as well as local knowledge and contacts in the local media. Unfortunately, many of these members left the Steering Committee soon after its formation.

**Issue 20: *Skilled Community Website Group members***

Finding individuals with adequate skills was a problem. The small membership was also limiting.

Members of the original Steering Committee had the following roles:

- Local government representatives
- Education providers
- Established community group members
- Health care providers
- ICT community workers
- Media contacts
- Telecommunications service providers
- Tourism operators
- Web developers

Access to tourism information and media contacts was considered extremely useful. The Steering Committee found it difficult to obtain access to local media outlets after key members left.

### **7.5.2 *Geographical Scope and Boundaries***

In the Wollongong and Bathurst case studies, much of the discussion of boundaries was prompted because of the need to agree on the legal entity's Model Rules. The Ballarat

test case did not go through the process of developing Model Rules because they were a pre-existing organisation. As a result, their membership boundaries were not discussed in detail early in the formation process. In July 2004, the Steering Committee decided to open membership to the City of Ballarat as defined by the local council, with the boundaries based on the local council map (Angeloni, 2004b). The justification given for selecting this definition of Ballarat was simply because the local council was able to provide a clear map of its boundaries (Angeloni, 2004b). There was no detailed discussion about membership boundaries, and no community consultation.

**Issue 22: *Shared goals & objectives***

It was essential to agree on a definition of ‘Ballarat’ to ensure all Steering Committee members understood the boundaries of the CGDN website.

## **7.6 Formation of Legal Entity**

Due to the hierarchical management structure of cBallarat, a Steering Committee (as opposed to a Community Website Group) was formed. The Ballarat Steering Committee was formed as a sub-committee of the existing not-for-profit organisation, cBallarat. This CGDN Project was therefore not required to form a new, not-for-profit legal entity. Although this simplified the overall process, this management structure posed other problems discussed below. cBallarat is a registered public company, limited by guarantee. It was registered on April 4, 2001. The Steering Committee was established on April 29, 2004 and had formal recognition from cBallarat on June 16, 2004.

Ballarat did not elect a Management Committee, develop any formal management structure within the membership, or assign roles such as president and secretary, because of the unique composition of the Steering Committee which was a sub-committee of cBallarat, which already had an established management structure. One Steering Committee member explained that no formal positions had been assigned because members felt it would “defeat the purpose of having a community website if someone is in charge” (Thompson, 2004). The role of the Steering Committee was to advise the cBallarat Executive Officer, who acted as the test case facilitator. However, the lack of formal positions meant that the cBallarat facilitator was required to be the

driving force and committee decision-maker throughout the development, with no community members accepting responsibility. The cBallarat Executive Officer reported the Steering Committee's recommendations to the cBallarat Board, who made final decisions. The lack of independence has been an issue of contention for some community members.

**Issue 36: *Community control***

Due to cBallarat's control over the Steering Committee, the Steering Committee members and the Bathurst community as a whole did not have control over the CGDN website.

**Issue 23: *Governance policies***

The Wollongong and Bathurst test cases established formal positions and policies as part of the requirements for forming a new legal entity. However, the Ballarat Steering Committee did not form a new legal entity and was therefore never officially required to assign formal positions or establish policies.

The major problem faced by the Ballarat Steering Committee was that the management of cBallarat did not see the ownership and development of a CGDN website as being 'core business'. Therefore, it was often difficult to get decisions made about the CGDN website by the cBallarat Board. Ideally, the CGDN Project sub-committee, or the cBallarat facilitator, should have been given authority to approve decisions made by the Steering Committee about CGDN Project.

The Ballarat CGDN Project did not comply with the CGDN Policy's requirement for broad community representation on the Community Website Group (in this case, the Steering Committee). cBallarat is an existing company where membership is defined by the company's constitution. To allow for broad representation would have required constitutional amendments. The cBallarat Board was unwilling to make such amendments for what it considered to be a minor project.



**Issue 14: *Community commitment & contribution***

The Ballarat Steering Committee was not widely representative of the community. Due to the management arrangement with cBallarat, membership rules already existed and were therefore automatically applied to the management group. However, these membership rules did not comply with the CGDN Policy.

**Issue 4: *CGDN Policy poorly enforced***

auDA and auCD did not enforce the CGDN Policy requiring the Community Website Group to be representative of the community.

As the case of cBallarat has demonstrated, it is important to ensure that the setting up of a CGDN website is central to the purpose and role of the pre-existing organisation, and compatible with its overall goals and objectives.

## **7.7 Membership**

### **7.7.1 *Business Membership***

Business interest in the Ballarat community website remained low throughout the planning, development and launch. Feedback from community members suggested that this lack of interest may have been because a number of unsuccessful commercial ‘community focused’ websites had been previously set up in Ballarat (Thompson, 2004; Hotchin, 2005). These failed ventures, which cost many businesses large amounts of money, may have made the business community wary of such websites. The lack of support from business meant that there was no funding provided from the commercial sector.

**Issue 14: *Community commitment & contribution***

Local businesses were not involved in the CGDN website. This limited content, exposure and funding opportunities for the CGDN website. This lack of business involvement was attributed to prior negative experiences with similar projects.

### **7.7.2 Community-wide Membership**

As explained in Section 6.6, there was some concern about the breadth of the community represented by the Ballarat community website management hierarchy, mainly due to the structures of the steering commitment and of cBallarat management. The committee was not required to prove their broad community representation because cBallarat was a pre-existing not-for-profit organisation. Apart from the advertisement of the initial public meeting, there was no publicity to encourage the wider community in the year after the public launch.

#### **Issue 11: Local promotion**

The cBallarat facilitator decided to limit publicity prior to launch. This resulted in low participation and limited community representation on the committee.

## **7.8 Moving Forward**

### **7.8.1 Problems Encountered**

Steering Committee members were critical of the management of their community website. They attributed their slow progress, website development delays and low community involvement to the lack of leadership from the cBallarat facilitators.

In contrast to Wollongong and Bathurst, where community members assumed responsibility for some of the OCOS and CGDN documentation, Ballarat Steering Committee members did not contribute. A lack of coordination by the cBallarat facilitator led to duplication of web planning and development efforts, and an inability to gain momentum and support for the CGDN Project in the local community.

#### **Issue 10: Committed Management Committee members**

Ballarat Steering Committee members did not contribute to the completion of documentation, and gave limited input to the development of the CGDN website. Few Steering Committee members regularly attended meetings or participated in CGDN discussions.

Members of the other test cases suggested that the champion needed to have certain skills, including local knowledge and managerial skills. The first cBallarat facilitator had only lived in Ballarat for a short time (less than 2 years). This lack of community knowledge and few local contacts may have contributed to an inability to achieve a high profile in the local community.

In February 2005, the cBallarat facilitator left cBallarat, giving little notice to the Steering Committee members. All CGDN Project documentation had been completed by the cBallarat facilitator, and Steering Committee members had made little contribution to the limited written plans and meeting notes made. None of the existing documentation was passed on to Steering Committee members before the cBallarat facilitator left, and as a result some of this information was lost. This occurrence highlights the importance of succession planning in order to replace members who have left and ensure smooth transition of roles when a changeover occurs.

**Issue 33: *Management succession planning***

Central storage of all relevant documents, in a location accessible to all management committee members, would have ensured that these documents were not lost when the facilitator left the group.

After the departure of the cBallarat facilitator, the Steering Committee did not communicate or meet regularly again until June 2005. At this time, the new cBallarat facilitator ‘re-formed’ the group with the same members, and continued to work on the website. This second cBallarat facilitator was the cBallarat employee who initially secured cBallarat’s management of the test case.

**7.8.2 *On-going Recruitment***

As planning and development progressed, it became evident that it was essential to maintain access to the skills identified in Section 6.5. However, Ballarat did not replace members as they left, and did not continue to promote the CGDN Project to recruit new members. Steering Committee members seemed unconcerned that they did not have a broad skill base, instead expecting their cBallarat facilitator (who was paid) to resolve any issues that arose. While the idea that a paid manager dedicated to the CGDN

website would minimise the burden on members was supported by comments from Wollongong and Bathurst community members, the Ballarat test case demonstrated that this was not a satisfactory solution. The lack of successful management by the cBallarat facilitator may have been because the individual was also managing other projects in their cBallarat role.

The decision to delay recruitment for and promotion of the CGDN website until after launch was supported by the majority of Steering Committee members, and approved by cBallarat. This strategy was based on the belief that it was more efficient to build the website and then involve the community (Angeloni, 2004c; Thompson, 2004). However, this is in direct contrast to the CGDN Policy (.au Domain Administration, 2006c). Eliminating the opportunity for new members also limited the number of fresh ideas available, and provided only a narrow view of the Ballarat community when designing the website and deciding on appropriate content and functionality.

## **7.9 Domain Name Application**

Bathurst's Domain Name Application (see Domain Name Application) was completed by the first cBallarat facilitator, without any involvement from Steering Committee members. The Domain Name Application was based entirely on cBallarat's vision for the CGDN website, rather than the community's desires.

### **Issue 36: *Community control***

Documentation submitted in support of Bathurst's CGDN application was not completed by the community, and the plans were not developed by community members.

Later planning by the second facilitator was based on the philosophy that "Overcomplicated business plans and strategies will disengage many of the stakeholders in the target region" (.au Community Domains, 2006a), and plans were therefore kept basic.

## **7.10 Website Vision**

The Ballarat Steering Committee defined their vision for the Ballarat community website as to:

*“Provide the people of Ballarat with an engaging, community-focused website, that is innovative and self-sustaining by meeting the expectations of its users.”*

(Ballarat CGDN Project, 2004)

The need for the CGDN website to be self-sustaining was seen as essential, with cBallarat unwilling to subsidise the CGDN Project on an on-going basis. The cBallarat facilitator indicated that cBallarat expected to recoup all finances spent on the development of the website. The most highly promoted feature of the Ballarat CGDN website was the business directory (.au Community Domains, 2006a), in contrast to the community focus of the other two CGDN websites.

## **7.11 Website Development**

Website development was a slow process, and significant progress was not made until late 2005. Members of the Steering Committee struggled to develop a shared vision of the CGDN website, which caused delays, disagreements and the loss of members.

### ***7.11.1 Community Website Design and Development***

In the early stages of planning, the Steering Committee members were divided on the appropriate method for web development. One member of the committee was an information technology worker, and negotiated with 8 other local information technology competitors to work collaboratively to develop the website for free (Hotchin, 2005). He believed a platform could have been completed within 10 weeks, allowing the Steering Committee and wider community to then populate the website with appropriate information. However, the cBallarat facilitator and some of the other Steering Committee members did not support this plan, preferring to pay to have the website professionally developed. After more than 6 months of delays, the local information technology workers retracted their offer to help. These delays were caused by further Steering Committee disagreements about a range of issues, including the

appropriateness of advertising, the types and sources of website content, and effective ways to include the community (Hotchin, 2005).

A decision was made in February 2005 to employ a local web development company to build the basic CGDN website, at a cost of \$20,000 (Hotchin, 2005). This company had a staff member represented on the Steering Committee. The decision to pay \$20,000 angered some Steering Committee members, and they withdrew their support for the project (Hotchin, 2005). However, soon after this decision was made the first cBallarat facilitator left and this decision was not made official. When the second cBallarat facilitator assumed responsibility later in 2005, he decided to use open source software and construct the website himself rather than paying the local web development company. The focus of the second facilitator was technology, rather than the community itself.

**Issue 28: *Technical implementation***

**Issue 29: *Infrastructure***

The Steering Committee members and the cBallarat facilitator experienced difficulty agreeing on the details for technical implementation of the CGDN website.

As well as the discontent within the committee, the Ballarat Steering Committee members expressed hostility towards the OCOS Project Manager, and blamed the OCOS Project for many of the problems they experienced. The most common complaint was that the CGDN Scheme “still expects each little suburb with its geographic domain name to have to go and find a web developer to knock up a home page with some links ... Ridiculous.” (Hotchin, 2005). There were two problems being identified by Steering Committee members when they made this complaint: the geographic scope of each CGDN was unrealistic; and the resources required to undertake a CGDN Project were too great for a newly formed Community Website Group to have access to.

The Wollongong and Bathurst Community Website Groups negotiated the coverage of their respective CGDNs, however the Ballarat Steering Committee was not given this opportunity (see Section 7.5.2). This problem was due to the cBallarat management structure.

The OCOS Project Manager had informed each test case facilitator that templates were being developed for communities to use in the future. (auCD assumed this role when it was established.) This information was not shared by the Ballarat facilitator, contributing to the negative attitudes held by the Ballarat Steering Committee members. The Wollongong and Bathurst Community Website Groups were in contact throughout the CGDN website development process, providing feedback and sharing resources to minimise the resources required by each test case. The cBallarat facilitator was unenthusiastic about sharing ideas or resources with the other test cases. This lack of interaction with the other test cases may have exacerbated the idea that each test case was required to develop their CGDN website independently.

**Issue 17: *Communication mechanisms***

The cBallarat facilitator's lack of communication with Steering Committee members, the OCOS Project Manager and the Wollongong and Bathurst test case facilitators impacted negatively on the morale of the Ballarat Steering Committee members.

The community website (Figure 7.3) was launched June 21, 2006.

### ***7.11.2 Website Structure***

Early discussions were focused on determining appropriate functions and content to encourage community involvement in the website. It was planned that the structure of the website would be determined based on the content and functions chosen. The website contained 5 major segments, most of which were unpopulated at the time of launch.

- Ballarat.vic.au
  - Information about the Ballarat CGDN Project, cBallarat's role as CGDN Project manager, the roles of key organisations, technical specifications, and opportunities for the community to participate
- Community Link
  - Links to the websites of non-profit organisations in Ballarat
- Ballarat Community Resource Centre

- A directory of “health and well being” for the Ballarat region (Ballarat Community Resource Centre, 2006), including information about and links to community legal assistance, multicultural issues, emergency assistance, welfare assistance, and health issues
- Big Ballarat List
  - A directory of Ballarat websites, covering business and non-profit organisations
- Community Forum
  - In the first 6 months after launch (June 29, 2006), there were 22 posts on the community forum (ballarat.vic.au, 2007).

### ***7.11.3 Development Software***

The second cBallarat facilitator to manage the Ballarat CGDN website and direct the Steering Committee decided that open source software was the most appropriate option for the website, costing only AU\$137 (ballarat.vic.au, 2006b). The open source Joomla! Content Management System was used on the website (ballarat.vic.au, 2006b).

## **7.12 Cost**

The greatest cost incurred in the development and launch of the CGDN Project was the purchase of a custom-built server (ballarat.vic.au, 2006b; Drever, 2006). The majority of the costs incurred by the CGDN Project were paid by cBallarat, with cBallarat expecting to recoup the money after the launch. Ballarat City Council also donated “substantial funds” to the project (Angeloni, 2004a; Parkinson, 2006b), despite its lack of community involvement and absence of a web presence. This financial support was obtained through cBallarat’s close links with the council.

The relationship with cBallarat benefited the Ballarat Steering Committee because they were able to invest in all necessary equipment and software without struggling to get funding from external sources. The experience of the Ballarat test case makes a strong case for fostering partnerships with existing community-based and technology-focussed organisations because they have existing resources.



**Issue 36: *Community control***

cBallarat viewed the CGDN website as a money-making venture, to the detriment of the community. This contributed to the lack of community consultation and community control over the CGDN Project.

The local council has significant power over decisions made by cBallarat, and it was this extremely close relationship that led to the council's donation. CGDN Policy states that council cannot control a CGDN Project.

While funding is essential to develop a community website, the Ballarat Steering Committee focused heavily on financial issues to the detriment of grassroots community involvement. The cBallarat Executive Officer was so "busy acquiring funds and purchasing" (Parkinson, 2006b) that there was no time for community consultation. This contradicts the basis of the CGDN Scheme, where the community is the starting point for all decisions and actions.

**Issue 18: *Viable level of funding***

As identified above, cBallarat viewed the community website as a money-making venture, to the detriment of the community. Funding was viewed as the key priority, rather than as a tool to implement the wishes of the community. The community was not consulted about key community website decisions. This is in direct contrast to CGDN Policy.

**7.13 Functions**

The Steering Committee members spent numerous meetings discussing possible functions for the website. Preferred functions included:

- a calendar
- a business directory
- a community directory
- general information about the local community,
- dynamic content to encourage repeat visits (news, weather)
- forums

- online voting on local issues

While liability and cost were major concerns for other test cases, these were not considered relevant issues by the Ballarat Steering Committee members. The Wollongong and Bathurst test cases chose a phased approach to the implementation of these features, allowing the community website to be launched more quickly and incorporating community feedback into the website. In contrast, Ballarat delayed the community website launch until all features were completed. The motivation for this decision was twofold:

- the cBallarat Board believed that the community would be more likely to make return visits if the website was complete, and cBallarat would be therefore more likely to make money this way
- the belief that community members were unwilling to participate in the development of the website

#### **Issue 17: *Communication mechanisms***

Ballarat did not consult with the community before the launch of the CGDN website, and did not allow the wider community to contribute ideas or feedback.

In the case of Ballarat, the use of a pre-existing organisation carried certain implications about how the business directory would be implemented due to other concurrent projects that cBallarat was involved in. This did not preclude a business directory being set up on the community website.

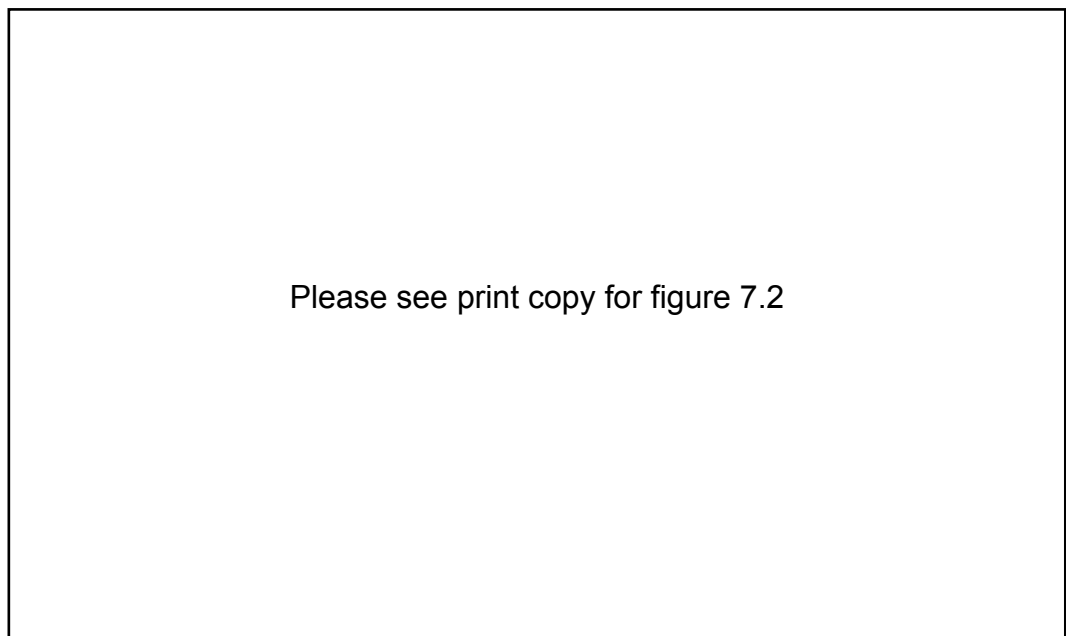
#### **Issue 34: *Independent managing body***

Allowing pre-existing organisations to develop and manage a CGDN website impacts on the structure and content that can be used on the community website.

## **7.14 Managing and Launch**

The public launch of the Bathurst and Wollongong community websites was delayed due to auCD planning and requirements. However, the Ballarat community website was not ready for launch until June 2006, so the auCD delays (see Section 4.16) had little impact on its launch date.

After its allocation, the ballarat.vic.au domain remained unused until April 14, 2006. CGDN Policy requires that CGDNs are used only for the display of community websites. However, for approximately one month from April 14, 2006, the ballarat.vic.au domain was used to host the development version of a new cBallarat website (see Figure 7.2), which contained no community content. This is in direct contrast to the CGDN Policy, and demonstrates the lack of adherence to the CGDN Scheme and CGDN Policy in the Ballarat test case.



*Figure 7.2: Ballarat CGDN displaying cBallarat test website, April 18 2006*

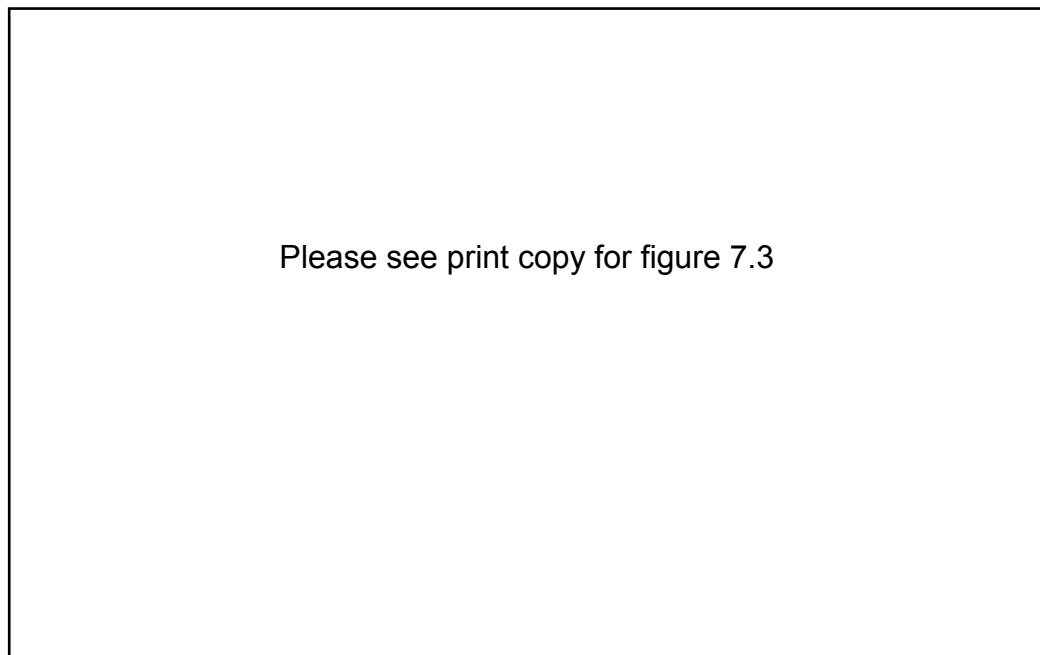
**Issue 37: Website content**

cBallarat used the CGDN to host a website other than the community website.

**Issue 4: CGDN Policy poorly enforced**

The deviations from the CGDN Policy by cBallarat were not addressed by auDA and auCD.

The launch of the Ballarat CGDN website (Figure 7.3) was held on June 21, 2006. The launch was coordinated by a Steering Committee member who was also on the City of Ballarat council, and owned a local Public Relations company. The council demonstrated strong support for the launch through the provision of a variety of resources, and the event was publicised in the local newspaper (Parkinson, 2006a).



*Figure 7.3: Ballarat CGDN website, June 21 2006*

The national launch of the CGDNs was held on August 8, 2006. A member of the Ballarat community website management committee was invited and accepted the offer to make a presentation on determining the content for a CGDN website.

### **7.15 Medium-term Vision for the Community Website Group**

No publicity or planning was undertaken in the year after the public launch. Despite promotion of a community feedback session scheduled for six months after launch, this did not occur. The medium-term vision for the Ballarat CGDN website has not been articulated.

## 7.16 Post-Launch Experiences

Despite expectations of strong community involvement after the website launch, there was little active participation by community members. The scheduled review meeting to obtain community feedback was not held. After launch, no significant changes were made to the Ballarat CGDN website.

### **Issue 14: *Community commitment & contribution***

The Steering Committee decided to limit community involvement until after the launch. However, after the launch no feedback was sought from the community, wider membership was not promoted, and no mechanisms were established to allow the community to contribute content to the website. This lack of community involvement is likely to lead to failure in the long-term.

## 7.17 Reflection

The lack of policy enforcement in the Ballarat test case allowed the development and implementation of a community website which did not adhere to the CGDN Policy. Changes to the CGDN Policy made to accommodate the specific requirements of the Ballarat test case also meant that many of the community engagement ideals of the original CGDN proposal were not reflected in the Ballarat test case. The results of these changes demonstrated the importance of adhering to transparency guidelines when developing and modifying government policy.

Allowing the Ballarat test case to be established by an existing organisation removed many of the community engagement requirements experienced by the Wollongong and Bathurst test cases. While there were significant delays in the Ballarat test case, the decision-making process was streamlined, demonstrating that the processes required to allow community members to participate require a longer time frame for implementation than if a single organisation (or individual) is permitted to make necessary decisions. When the Ballarat test case attempted to engage with the community, the previous negative experiences of community members (with both community technology projects *and* the managing organisation) were reflected through their unwillingness to participate in the CGDN test case. The Ballarat community focus

on commercial enterprise (to the detriment of community schemes) was also demonstrated.

The lack of accountability to the community meant that planning was completed by individuals within the managing organisation, rather than in consultation with the community. Only the minimum planning necessary to gain access to the CGDN was conducted. The limited planning impacted negatively on the community website implementation process, and contributed to the slow progress in the first 18 months of CGDN discussions in Ballarat. This lack of planning, in conjunction with the management structure of the test case, limited access to external funding schemes, and specifically non-profit funding initiatives. The lack of access to funding was overcome through the receipt of significant funding from the managing organisation. Despite this funding (which was greater than the money available to the Wollongong and Bathurst test cases), the Ballarat test case was unsuccessful at developing a community website that engaged community members, because there was no community buy-in.

This test case demonstrated the impact of allowing a single entity to manage a CGDN website, as opposed to enforcing community ownership. Unlike the other test cases, the culture of the community had minimal impact on the development process, and facilitation requirements were reduced due to the small number of individuals involved. Despite these apparent advantages, community engagement was not prioritised and therefore it is strongly argued that the resulting community website does not reflect the needs and desires of the community. There was no engagement with existing community networks. Planning completed in the early stages to satisfy the CGDN application requirements was not implemented; instead, a later round of planning (which included even less community engagement) introduced commercial concepts was conducted. This more extensive planning formed the basis for the website development.

The CGDN Scheme did not provide guidance or support in the selection of technologies for the community websites. This technical freedom posed significant issues in the Ballarat test case, and was a major reason that the planning process required multiple iterations. The managing group included only a few community members, and almost all of these community members left the group due to (what they perceived to be) unfair

and inappropriate selections of technology. Rather than using the skills of the participating community members, which were being offered voluntarily, the managing organisation continued to suggest that the group pay a large sum of money to purchase a vendor solution. This process relating to technology selection also highlighted the importance of project leaders who are sensitive to participants, aware of the needs and concerns of the community more broadly, and are accountable to the community members.

## **7.18 Conclusion**

The Ballarat test case experienced a range of difficulties not faced by the Wollongong and Bathurst communities, many of which could be attributed to the complex cBallarat management structure.

Feedback from members of the Ballarat test case was largely negative. Many of the specific criticisms identified by Ballarat Steering Committee members had been previously identified by members of the other test cases, and noted by the OCOS Project Manager as issues to be resolved by the CGDN management body, auCD. Participants felt that their ideas and opinions were ignored, and that the group did not receive appropriate support from cBallarat. The Steering Committee had little power due to the cBallarat management structure, raising questions about the viability of allowing existing entities to license CGDNs.

Despite the on-going problems with the Ballarat test case, Ballarat was considered to be a positive example of a CGDN Project by the auCD General Manager (Scully, 2006a), because the test case had access to financial resources. The auCD General Manager did not enforce the CGDN Policy on the Ballarat test case, and did not communicate directly with Steering Committee members, preferring to speak only with the cBallarat facilitator. The CGDN Policy requires communities to involve the community, plan, organise funding, then develop the website. In contrast, Ballarat focused on the funding to the detriment of community involvement. This chapter has described and analysed one approach to developing a community website, developing a deeper understanding of issues faced by groups developing community websites (*research goal iv*). In conjunction with the description and analysis of two other approaches to developing a

community website in **Chapters 5 and 6**, and the summary comparison provided in **Chapter 8**, this chapter has also addressed *research goal ii*.



## **Chapter 8: Discussion & Lessons Learned**

### **8.1 Introduction**

**Chapters 4-7** identified issues experienced during the trial of the Community Geographic Domain Names (CGDNs) using grounded theory. These issues were related to the CGDN Scheme and CGDN Policy, management of the CGDNs by .au Domain Administrators (auDA) and .au Community Domains (auCD), CGDN Project leadership, publicity and advertising of the CGDN Scheme and CGDN Projects, community involvement, finance, the Community Website Groups, and CGDN Website development and implementation.

This chapter will present a summary of the issues identified across the three case studies. Based on the documented experiences of the test cases, models developed as part of the grounded theory process will be discussed and some of these models will be presented to explore the relationships between issues. A comparison of the three case studies, based on facilitation and CGDN Scheme requirements, is then provided. Finally, recommendations relating to CGDN Scheme features and to government-initiated, structured community website schemes more generally, are established and lessons applicable to both the CGDN Scheme and to government-initiated, structured community website schemes are presented.

### **8.2 Summary of Issues Identified**

The following table presents all issues identified in **Chapters 4-7** of this thesis. An *X* denotes the presence of an issue in the corresponding chapter.

Table 8.1: Summary of case study issues

<i>Issue</i>	<i>Description</i>	<i>Chapter 4: CGDN Model</i>	<i>Chapter 5: Wollongong</i>	<i>Chapter 6: Bathurst</i>	<i>Chapter 7: Ballarat</i>
1	Specification and fulfilment of auCD's role	X			
2	Coordinated support for Community Website Groups	X	X	X	
3	Organisational issues within & between auDA & auCD	X	X	X	
4	CGDN Policy poorly enforced	X			X
5	CGDN Policy modifications	X	X	X	
6	auDA procedures	X			
7	Geographic domain policy modifications (com.au, net.au)	X			
8	auCD's actions contradict CGDN philosophy	X			
9	Effective facilitator		X		X
10	Committed Management Committee members		X	X	X
11	Local promotion		X		X
12	National promotion		X	X	
13	Broad community representation		X	X	X
14	Community commitment & contribution		X	X	X
15	Mechanisms for maximising community involvement		X	X	
16	Financial investment from the community		X		
17	Communication mechanisms		X	X	X
18	Viable level of funding		X	X	X
19	Competition for available funds		X		
20	Skilled Community Website Group members		X	X	X
21	Excessive documentation requirements		X	X	X
22	Shared goals & objectives		X	X	X
23	Governance policies		X	X	X
24	Community consultation		X		X
25	Presence of volunteer workers		X	X	
26	Limitations imposed by auDA / auCD		X	X	
27	Community Website Group planning		X	X	
28	Technical implementation		X	X	X
29	Infrastructure		X	X	X
30	Communication between auCD and Community Website Group		X	X	
31	Competition with existing local organisations			X	
32	Unrealistic financial plans			X	
33	Management succession planning				X
34	Independent managing body				X
35	Trust and loyalty				X
36	Community control				X
37	Website content		X		X

In **Chapter 4: Monitoring the CGDN Scheme and Policy**, eight issues were identified. There were 24 issues (including 21 new issues) identified in **Chapter 5: CGDN Project 1 – Wollongong**. **Chapter 6: CGDN Project 2 – Bathurst** identified 22 issues (including three new issues). There were 19 issues (including five new issues) identified in **Chapter 7: CGDN Project 3 – Ballarat**. Of the 37 issues listed, 25 were identified in more than one of the chapters.

### 8.3 Categorising the Issues in the CGDN Scheme

Open coding was conducted as part of the grounded theory process, resulting in the identification of the issues in Table 8.1 (referred to as ‘incidents’ in grounded theory).

A thematic approach was used to informally categorise issues, based on the recorded experiences of the test case members. This categorisation resulted in the 37 issues being refined to eight categories, based on reviews of each of the individual case study stories. Many of these categories have similarities to those discussed in the literature (see Section 2.4.4).

The eight thematic categories identified in the grounded theory refinement of issues were:

- auDA and auCD
- Policy
- CGDN project leadership
- Promotion and awareness
- Community involvement
- Finance
- Community website group
- Infrastructure

For a category-based, detailed discussion of the issues, and an analysis of their presence or absence in each test case (developed during the application of grounded theory methods), see Appendix J.

## **8.4 Validating the Identified Categories by Comparison to the Literature**

Many of these issues identified throughout **Chapters 4-7** are discussed in existing literature (see **Chapter 2: Literature Review**). Grounded theory methods were applied to classify the issues identified in this research using terminology found in published literature. This process revealed that five such factors (factors 1-5 below) were found in the literature. A sixth factor (factor 6 below) is also found in the literature, however is often implied rather than explicitly stated. The six factors found in the literature and identify in the test cases are:

1. Value to the community
2. Community awareness of website
3. Viable level of funding
4. Effective management team and leadership
5. Active membership
6. Website design and functionality

These factors have been shown in the literature to impact on the viability of community websites. Their presence in the test cases in this research confirms their presence in the literature. Refer to Appendix J for further discussion of these factors and their relationship to each other.

## **8.5 Modelling Issues and their Relationships**

**Chapters 4-7** demonstrated that there were many issues faced by the test cases as they undertook the trial of the CGDNs. Each issue cannot be considered in isolation; all issues impact on other aspects of the community group and the website itself. This concept is supported by the test case experiences. If not addressed early in the process, each of the identified issues can have a significant impact on the viability of the community website, with a flow-on effect seen throughout the project.

All representations of the experiences, and of factors relating to community website viability that were determined by these experiences, are based on information provided by individuals participating in the experience (Creswell 2003, 133). For more details on

the method of identifying issues, see Section 3.5. For a discussion of grounded theory methods specifically, see Section 3.5.2.

The Model of CGDN Project **Issues** (Figure 8.1) presents a graphical depiction of issues that affected each Community Website Group and their CGDN Website. It presents issues within each CGDN Project, which means those under the control of that community (for example, shared sense of ownership), and those that are unique to each specific community (for example, community wealth). Figure 8.1 does not depict issues caused by, or strongly related to, the management of the CGDN Scheme by auDA and auCD. These issues are presented in Appendix J.

Excluding those issues related only to auDA and auCD (and depicted in Appendix J), all issues identified in **Chapters 4-7** can be mapped to at least one of the six factors (in bold) in Figure 8.1: Model of CGDN Project **Issues**. In many cases, it may be possible to logically map issues to more than one factor. Many issues affect other issues, which in turn affect one or more factors. Each of the relationships depicted in Figure 8.1 have been identified from the case studies, and explicitly noted throughout **Chapters 4-7**.

Through analysis of all information collected from the three test cases using grounded theory methods, a network of relationships between pairs of issues, and between issues and factors, was identified. This network of complex relationships is presented in Figure 8.1: Model of CGDN Project **Issues**. This model demonstrates the significant impact that a single unresolved issue may have on the viability of any community website project.

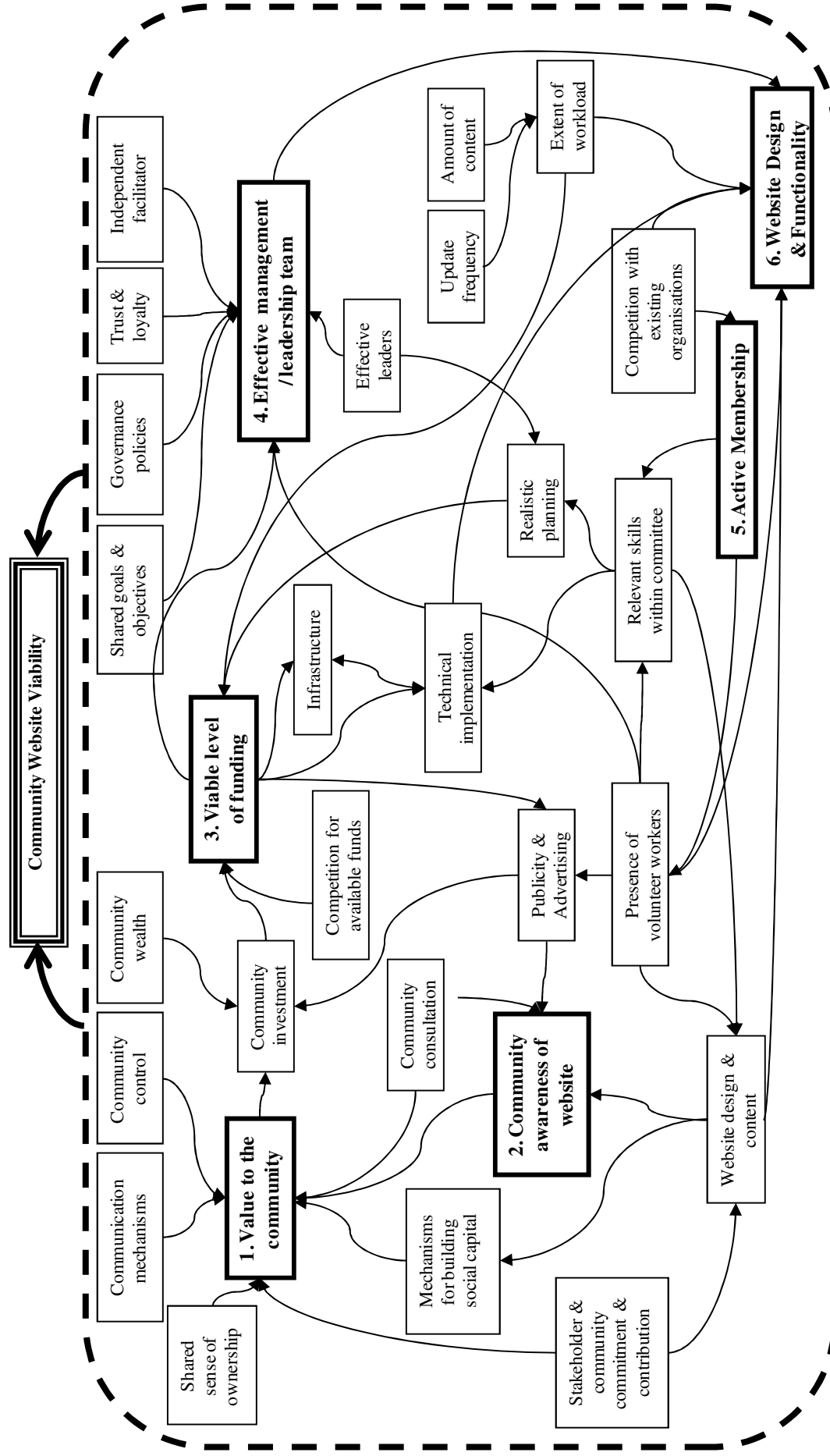


Figure 8.1: Model of CGDN Project Issues

The majority of the boxes in Figure 8.1 (all non-bold boxes) represent the specific issues that were identified in **Chapters 4-7** and affect communities attempting to develop a community website under the CGDN Scheme. These issues are more specific and manageable than the factors, and some of these issues can be addressed independently. Each of the identified issues and factors impacts on other issues and/or factors, as shown by the arrows. For example, the ‘update frequency’ and ‘amount of content on a website’ will determine the ‘extent of workload’ that must be managed by the Community Website Group. This workload is only one of the issues that impacts on the presence and success of the ‘website’ itself. Other issues are the ‘technical implementation’, the ‘website design and content’, ‘competition with existing organisations’, the ‘presence of volunteer workers’ to manage the website, and an ‘effective management team’. Some of the identified issues represent decisions made (for example, ‘website design and content’) and the impact of those decisions, while others are actions (for example, ‘technical implementation’) and yet others are resources (for example, ‘volunteer workers’). The influence of each issue is likely to vary for each community, therefore the linking arrows are not weighted.

The relationships recorded in Figure 8.1 were observed in the three case studies. However this Model is not necessarily exhaustive. It is possible that unidentified relationships may exist between pairs of issues, and between issues and factors. Further research with a larger number of case studies would be useful to confirm the identified relationships and identify further relationships within the Model of CGDN Project **Issues**.

Community groups attempting to develop a community website are often overwhelmed with the amount of commitment required in the early stages and the number of issues they are required to address, as shown in the complexity of the Model of CGDN Project **Issues**. In an attempt to simplify the factors that must be addressed at initiation of such a project, and the relationships between these factors, a Model of Relationships Between CGDN Project **Factors** (see **Appendix J**) was developed as part of the grounded theory process. This model was derived from Figure 8.1 and discussions with community website group members. The issues identified were classified into the six factors seen in Figure 8.1: Model of CGDN

Project **Issues** (Funding, Management / leadership, Value to the community, Website design and functionality, Awareness and Active membership) and the model demonstrates the interdependencies of these factors, as well as their relationship to community website viability.

The models above depict the issues that directly impact on each CGDN Project. A Model of CGDN **Scheme** Issues (see Appendix J) was also developed to describe the relationships between the issues related to the CGDN Scheme and its management, rather than to the activities within each CGDN Project. The CGDN **Scheme** Issues relate mainly to auDA and auCD, and the decisions made by the two organisations in relation to the CGDN Scheme. Unlike the previous models, that presented issues and factors that had either positive or negative impacts, all issues identified in the Model of CGDN **Scheme** Issues had a negative impact on the Community Website Groups, as discussed in **Chapters 4-7**. The models presented and referred to in this section identified issues that affect the development and implementation of community websites, contributing to *research goals iv and v*.

## **8.6 Comparison of Test Cases in the CGDN Scheme Trial**

The three test cases used various approaches when developing their community website under the CGDN Scheme. As identified in Section 2.3, one criticism of Community Informatics projects has been that practitioners have struggled to link ‘one-off’ practical projects to generalisable academic outcomes. The comparison of the three test cases developed under a structured scheme provides a contribution which allows researchers to consider whether, and why, identified experiences are common to diverse communities.

This section will first consider the approaches to facilitation used in each test case, and the implications of each facilitation approach, in Table 8.2. Three approaches to facilitation are identified:

- Self-driven
- Highly facilitated, and
- Company-driven.



Table 8.2: CGDN Scheme Trial Implementation – Approaches to Facilitation

What the CDGN Scheme trial says about...	How was it implemented by auDA/auCD	What happened in Wollongong (self-driven)	What happened in Bathurst (highly facilitated)	What happened in Ballarat (company-driven)	Implications
<b>Facilitation</b> - Each test case nominated a facilitator when applying to be involved in the CGDN trial	Tasks of facilitator not clearly defined  Members of the local university assumed responsibility for facilitation. These individuals were committed to the project, but had limited time to commit to it and limited connections within the community. After establishment, members of the community assumed active roles in the management of the project.  Due to the integral role of community members in the progress of this test case, it is described as <b>self-driven</b> .	An individual with close ties to the community acted as the facilitator. This individual also had extensive knowledge of the CGDN Scheme – she was involved in developing the proposal of the scheme and was the manager of OCOS. With previous project management training, a high level of self-motivation and a passion for the project, this facilitator drove the project and was integral to its success in the establishment stages. After the departure of the facilitator, the rate of progress slowed significantly.  Due to the control maintained by the facilitator in this test case, it is described as <b>highly facilitated</b> .	The Ballarat test case was allocated a company staff member as the facilitator. This individual had little interest in the project or time to commit to it, and had no significant connections within the community (she had lived there only a short time). The lack of interest from the facilitator resulted in little progress until a new facilitator was assigned. This facilitator was more pro-active, however he assumed ultimate responsibility and control rather than promoting community control.  Due to the control maintained by the company facilitating this test case, and the lack of community involvement, it is described as <b>company-driven</b> .	The enthusiasm, skills and community contacts held by the facilitator are key factors in the successful establishment of community websites. An active, resourceful and involved facilitator is essential in the early stages. In communities where community members are willing to assume responsibility for the project, a <b>self-driven</b> project is ideal, as it provides a high level of community control. However, for rapid progress or in communities with little willingness to be involved in a ‘hands-on’ way, <b>highly facilitated</b> projects are necessary. <b>Company-driven</b> projects do not meet the requirements of the CGDN Scheme and should be avoided.	

As explained in the ‘Implications’ in Table 8.2, self-driven and highly facilitated approaches to structured community website development have the potential to be successful, with the choice being dependent on the level of practical community support available. Company-driven facilitation is inappropriate, as it does not meet the ‘community-based’ requirement of the CGDN Scheme, and allows a CGDN to be controlled by a single entity.

The following table (Table 8.3) presents a summary comparison of the principles of the CGDN Scheme, how each principle was addressed in each test case, and the implications of the decisions made in each test case. The principles of the CGDN Scheme addressed in Table 8.3 are:

- Promotion and awareness creation
- Representation
- Independent managing organisation
- Funding, and
- Community website operation.

Table 8.3: CGDN Scheme Trial Implementation – Comparison of CGDN Scheme Principles Across Three Test Cases

What the CGDN Scheme says about... (the CGDN principles)	How was it implemented by auDA/auCD	What happened in Wollongong (self-driven)	What happened in Bathurst (highly facilitated)	What happened in Ballarat (company-driven)	Implications
<b>Promotion and awareness creation</b> - CGDN must be promoted in the local community	Encouraged but not enforced. No support (e.g. guides or templates) were provided to Community Website Groups	Promotion was conducted through a variety of local media outlets (e.g. radio, newspapers, Internet). Three community engagement meetings were held, with a high level of initial attendance. Significant community awareness was achieved. Subsequent meetings were promoted to the community.	Promotion was conducted through a variety of local media outlets (e.g. radio, newspapers, Internet) over a sustained period of time. The facilitator engaged directly with key stakeholders in the local community. There was a high level of attendance at initial community engagement meetings. Broad community awareness was achieved. Subsequent meetings were widely promoted to the community.	Limited promotion was conducted, and a single public meeting was held. There was a significant number of individuals at this meeting. Subsequent meetings were not promoted.	The amount of promotion prior to the initial community engagement meeting was shown to have a direct impact on community awareness and participation. Bathurst's approach of communicating directly with key stakeholders in the local community, as well as conducting broad promotion over a sustained period of time, was shown to be the most successful. Continued promotion of subsequent meetings and the activities of the test cases were also shown to have a positive impact on community awareness and participation. The provision of guides (e.g. who to approach, types of information necessary) and templates (e.g. for flyers) would be advantageous for communities undertaking this process.

<i>What the CDGN Scheme says about... (the CGDN principles)</i>	<i>How was it implemented by auDA/auCD</i>	<i>What happened in Wollongong (self-driven)</i>	<i>What happened in Bathurst (highly facilitated)</i>	<i>What happened in Ballarat (company-driven)</i>	<i>Implications</i>
<b>Representation</b> - Community Website Groups must be representative of their community	Encouraged but not enforced	Representation was achieved to a certain extent, but limited by a small membership.	Representation was achieved to a large degree with a large membership made up of many community organisations.	Limited representation and greatly influenced by local council. Largely controlled by members of a single company.	The Bathurst model was the closest to the CGDN requirements and the most successful, while the Ballarat model was the least representative. Diverse representation is important but difficult to achieve and control. While participating communities should be required to <i>encourage</i> broad community representation, it is inappropriate to refuse licensing of a CGDN to a community which is unable to achieve this broad representation due to low community participation. However, 'company-driven' applications do not meet the requirement of community representation and should not be approved.
<b>Independent managing organisation</b> - be a legally registered, community-based organisation - cannot be licensed by a single entity	Enforced only in some communities	Community members formed a new legally-registered entity to act as the managing organisation for the Wollongong CGDN.	Community members formed a new legally-registered entity to act as the managing organisation for the Bathurst CGDN.	An existing organisation, with close links to the local council, acted as the managing organisation for the Ballarat CGDN. This organisation was not community-based, and this situation did not meet the requirement that a CGDN cannot be licensed by a single entity.	Numerous issues resulting from the managing organisation structure were identified throughout the Ballarat test case implementation. These issues were not present in the other two test cases, where a new entity was formed. The experiences suggest that the ownership and structure of the managing organisation is integral to the success of a CGDN Project, and that managing organisation requirements should be strictly enforced in all communities to ensure that community ownership is maintained.

<i>What the CDGN Scheme says about... (the CDGN principles)</i>	<i>How was it implemented by auDA/auCD</i>	<i>What happened in Wollongong (self-driven)</i>	<i>What happened in Bathurst (highly facilitated)</i>	<i>What happened in Ballarat (company-driven)</i>	<i>Implications</i>
<b>Funding</b> - Community Website Groups must be self-funded and not-for-profit	No coordinated financial assistance provided to the Community Website Groups	Difficulties with sourcing funding through sponsorships or partnerships with local organisations. Received a \$1000 one-off grant from local council. Received a \$10,000 one-off grant from OICT. Resources donated by local university. Chose not to include advertising on the website.	Limited success – received a significant amount of in-kind support from the local community, mainly through personal connections of Community Website Group management committee members. Received a \$10,000 one-off grant from OICT. Also developed on-going funding streams through advertising on the website.	All expenses were covered by the company managing the test case.	auCD claims that Ballarat is the most successful test case based on their access to funding, implying that the <i>amount</i> of funding is auCD's main criteria for judging success.  Considering the issue of funding within the other limitations of the CDGN Scheme, Bathurst was the most successful at developing consistent and on-going revenue streams and access to resources. Participating communities should seek access to both in-kind and financial donations through engagement with the local community.

<i>What the CDGN Scheme says about... (the CDGN principles)</i>	<i>How was it implemented by auDA/auCD</i>	<i>What happened in Wollongong (self-driven)</i>	<i>What happened in Bathurst (highly facilitated)</i>	<i>What happened in Ballarat (company-driven)</i>	<i>Implications</i>
<b>Community website operation</b> - the domain name must only be used for the operation of a community website	Encouraged but not enforced	The domain name was used for the operation of a community website, limited to local community-based content. Community Website Group members decided to prohibit direct advertising on the website.	The domain name was used for the operation of a community website, limited to local community-based content. Community Website Group members decided to allow direct advertising of local businesses on the website.	The domain name was used as a test site for the managing company for a period of time. The domain name currently provides links to five community 'projects', one of which is the community website. The other four projects are community-related, and were based on existing projects of the managing company. Content on domain name is not fully under the control of the managing company.	The lack of vigilance in enforcing content restrictions has allowed the CGDNs to be used for purposes for which they were not intended. The organisation managing the CGDN Scheme should periodically check the content displayed on these domain names, to ensure it complies with the requirements of the scheme. Any intentional breaches of these requirements should have serious and enforceable consequences.

Table 8.3 presents five CGDN Scheme principles, the approaches taken to address these principles in each of the three test cases, and the implications of using those approaches. **Chapters 4-7** of this thesis described the experiences of the three communities involved in the CGDN Scheme trial. Table 8.2 and Table 8.3 have presented a summary of key findings from these three case studies, addressing facilitation approaches and the practical implementation of CGDN Scheme principles in each test case.

This section has presented a summary of three approaches to developing a community website, contrasting the experiences of the test cases as a result of the different approaches. Tables 8.2 and 8.3 were developed from the detailed description and analysis of the three approaches to developing a community website in **Chapters 5-7**, and address *research goal ii*.

## **8.7 Relationship between test case experiences & the literature**

Definitions of ‘community’ vary considerably in the literature (see Section 2.2) and this was reflected in the divergent understandings and expectations of participants in each of the three test cases. Even with the CGDN Scheme’s definition of community limiting the concept to geographic communities, some community members kept returning to common interest elements in an attempt to find a main focus for their community website.

One key element of ‘community’ as described by Butcher (1993), Day (2002) and Hopkins and Ewing (2002) – that all members of the community must recognise themselves as part of that community – was found to be significant in this research. The experiences of the Wollongong test case suggest that, while people often *describe* themselves as living in ‘Wollongong’, they *feel* more ‘at home’ in the smaller organic communities that exist within the city of Wollongong. These smaller communities are usually at suburb level, or small clusters of suburbs, depending on the geography of the area. The need for a shared social base (Butcher, 1993; Beamish, 1995) is also linked to the notion of belonging, with community members appearing to have more in common with those in their immediate surroundings (for example, in their individual suburb) than with people living in the city as a whole. It is likely that

developing a community website for such a sub-community (with flexible boundaries) is likely to be much more successful than attempting to cover the city's entire population in one website. One example of a community website which has taken this approach and has experienced success is Northern Illawarra Online (<http://www.nio.net.au/>). This community website limits itself to the affluent, coastal suburbs of the northern Illawarra (many of which are considered to be part of Wollongong). Difficulty gaining broad community involvement in a large community is not unique to Wollongong – research suggests that such community involvement is more achievable in smaller communities (Donovan et al., 2002), which explains the lower level of success in Wollongong.

The offline sense of community experienced within Bathurst, and enhanced by Bathurst's small population, provided a shared social base for all those participating in the Bathurst test case, and the close links with the existing economic community had a positive impact on Bathurst's success as suggested in the literature (Gurstein 1999 cited in O'Neil, 2002). Through the involvement of the local community, a sense of community ownership was developed (Romm and Taylor, 2001) and this feeling has contributed to the community's commitment to the success of the Bathurst community website. In contrast to Bathurst, Ballarat did not demonstrate any shared social base between the participants, supporting Beamish's (1995) claim that living in a shared geographical area does not necessarily result in a shared social base. The lack of involvement from the Ballarat community not only eliminated any feeling of community ownership of the community website, but also the conflict within the community had a negative impact on its success, supporting Romm and Taylor's depiction of the importance of community ownership and a sense of harmony as described in the 'Autonomy/Harmony Model' (Romm and Taylor, 2001).

Gurstein's (1999 cited in O'Neil, 2002) identification of leadership as an essential element for success in community technology projects was supported by the experiences recorded in this research. Each individual leader requires skills in facilitation specifically, and is most effective when supported by an enthusiastic management team (Beamish, 1995; Mieszkowski, 2000; Millen et al., 2002; Muylle and Basu, 2004; Vrazalic and Hyland, 2004; Ripamonti et al., 2005). The Bathurst test case with the most active, informed and enthusiastic leader, who also had skills in



community engagement and similar projects, was the most successful at engaging the community and developing a community website that reflected the community's values. This community was also the one with the most clearly defined aims, which sought to address the community's needs (Beamish, 1995; Mieszkowski, 2000; Day, 2002; Donovan et al., 2002).

Participants observed that it is necessary for any community group to have a broad range of skills in order to successfully implement a community website, as has been found in previous projects (Young, 2001). The skills identified by participants, such as project management skills, communication skills, the ability to build trust, and the ability to understand the community's needs, are supported by the literature (Donovan et al., 2002).

Many of the challenges experienced in Wollongong are attributable to the culture of the area, both in terms of the low participation rates and its diversity. Planning was required not only at the 'whole of community' level (Donovan et al., 2002), but at the sub-community level (for example, in Wollongong one set of promotional materials for the northern suburbs and a different set for the southern suburbs). This need for varied approaches may also be due to the CGDN's requirement for communities to adhere to standard plans and rules developed by an external entity with no understanding of the specific community, which led to the community covered by the Wollongong CGDN being too large. While the Bathurst and Wollongong facilitators shared resources, there were few situations where these were directly transferable, reinforcing the importance of considering the culture of the community to which you are catering. Due to this need to modify resources, it is likely that any resources provided by auDA and auCD in the future will need to be treated as templates by each community, rather than as final versions, ready for use.

The top-down approach to the introduction and implementation of the CGDN Scheme raises a number of issues, and goes against the 'community initiated' approach usually taken by practitioners who are experienced at this type of work. However, it also provides us with an opportunity to more accurately compare the three initiatives studied in this research, and consider whether different approaches to planning, facilitation, development and implementation produce different outcomes. The

experiences of previous projects in the Community Informatics area, that “information technology issues were [interwoven] with broader and more fundamental community development infrastructure issues” (Stoecker, 2005a, 16), were also found to be true in the three test cases implemented as part of a top-down approach, suggesting that even attempted coordination of resources from the outset does not allow communities to overcome this problem. For this reason, the lessons presented in Section 8.8.2 and Section 8.9.2 address both technology and community issues.

The belief that individuals who participated in community meetings and projects were those who already had significant amounts of social and political capital (Sullivan et al., 2002) was supported by the experiences of all three test cases. All participants in the Bathurst and Wollongong test cases were active members of at least one other community club or project. These existing ties provided opportunities to establish firm links with established and respected organisations, which positively contributed to the success of efforts to involve the broader community. Some of the individuals who attended the first public meeting in Ballarat and were original members of the management group had connections with existing organisations, however these people left the group early in the process. One likely explanation for their departure is that, being experienced in community projects, they were aware of the need to genuinely engage with the community and did not see that happening in the Ballarat CGDN Project. The lack of alignment between community needs and the goals of the website in Ballarat appears to be a significant concern for community members interested in the Ballarat community website. The high turnover of members experienced in Ballarat and Wollongong, and now beginning to occur in Bathurst, is common for community projects (Tanner, 2005).

Some research suggests that the level of funding does not play a major role in determining the participation levels and interactions between community members (Guthrie and Dutton, 1992 cited in Borgida et al., 2002). This was demonstrated in the Wollongong test case, where increases in available funding did not assist in member recruitment. However, in the longer term it could be argued that funding plays a critical role in the success of community websites (as evidenced in other research (Beamish, 1995; Millen et al., 2002; Fisher and Craig, 2004; Muylle and Basu, 2004;

Fisher and Craig, 2005; Ripamonti et al., 2005)): if all development and maintenance must be completed on a voluntary basis, then member burnout will increase and turnover will become a significant problem. Feedback from the test case participants indicates that it is necessary to have access to enough money to pay for website development and a small amount of maintenance to ensure that content is current. However, it should be noted that money alone does not solve the problem of member turnover. While it is not possible to eliminate member turnover, a balance of numerous elements (including leadership, planning and finance) is critical to ensure an environment in which members want to participate. The Bathurst test case achieved a balance of these elements, and was the most successful at retaining members.

As well as the amount of finances influencing the decisions and success of a community website, the source of these finances also impacts on technological and policy decisions made (Guthrie and Dutton, 1992). This was evident in Ballarat, where the funding body (cBallarat) influenced community participants so heavily that some left, and the remaining participants allowed cBallarat staff to make technology decisions and control the management group. These decisions also influenced who was able to manage the website in the longer term (Guthrie and Dutton, 1992). cBallarat staff must now be used (and paid in some form) on an ongoing basis. Another option for funding is requiring users to pay for access to information and services. While discussed in Wollongong, the management group believed that this was unlikely to succeed, as well as preferring not to expect community members to pay for use of a 'community' website (Beamish, 1995). There were many reasons that raising funding from the community was unlikely to succeed in Wollongong, however participants agreed that if the community website had provided valuable content that met the needs of the community then they would have been more likely to pay for it (Fisher and Craig, 2004). As well as competition from many other free sources to provide such information (Parameswaran and Whinston, 2007), difficulties identifying and targeting the users was a significant problem. These difficulties can be attributed to poor definition of boundaries. Hence, we can argue that selecting and defining appropriate communities (of a manageable size) contributes to financial viability.

The requirements of the CGDN Scheme require participating communities to meet significant commitments, including numerous elements of planning. While these requirements were initiated due to previous failed community technology projects (Australian Government, 2003a; London Advice Services Alliance, 2003; GrantStation, 2004), planning has been found to increase the likelihood of success (Millen et al., 2002; Vrazalic and Hyland, 2004). Therefore, communities who genuinely complete the required planning are enhancing their chance of success.

The selection of content and functionality on the three community websites was widely significant discussed by each management group, as had been experienced in previous projects (Fisher and Craig, 2005). Management groups wanted to provide content and functionality that was useful, however were limited by funds. This is a common experience, and is a reason that many community websites end up simply acting as portals to other websites (O'Neil, 2002). The Wollongong group spent over a year negotiating the content, and it is still a common topic of discussion at meetings. Part of the challenge in Wollongong was to identify content that would address the needs of the mixed cultural, ethnic, and linguistic backgrounds of the Wollongong population (Donovan et al., 2002; Heldal et al., 2004), which was caused by the large community the website was trying to represent. All community groups in the test cases have struggled to maintain updated content (Fisher and Craig, 2004; Parameswaran and Whinston, 2007), with Bathurst being the most successful at this because community members directly contributed content to the website. Wollongong provided similar functionality; this was used by community members but to a lesser degree. The most successful way of engaging the community was through the events calendars – these allowed community members to directly contribute content, required only minimal input from the management group, and provided a link between online and offline community interactions (Loader et al., 2000).

Both Wollongong and Bathurst intended to deploy numerous interactive elements on the website, which is supported by literature which says that these interactive tools can assist in the development of social capital (Millen et al., 2002; O'Neil, 2002; Preece, 2002; Clarke III and Flaherty, 2003; Vrazalic and Hyland, 2004). Despite these intentions, none of the three test case community websites provide interactive tools, due to a combination of technical and policy issues. The lack of interactive tools

on the websites has limited their ability to develop a sense of community and social capital. Community groups have been preoccupied with the basics of website establishment and maintenance, and so did not successfully achieve the implementation of complex tools that would allow the ultimate goals of the CGDN Scheme to be achieved. While much of the planning and externally-imposed requirements were designed to assist the community groups, this demonstrates a significant failing of the top-down approach taken by the CGDN Scheme – participating communities are so preoccupied with the basic planning and website development that their focus on engaging with the community, finding out the community's needs, and responding to these needs is secondary. It should be noted, however, that this problem may be less significant for communities starting to establish a CGDN Project since the national launch of the CGDN Scheme, because the requirements on communities have been reduced and there are now greater resources available to support these communities.

We have identified above numerous elements that have had a significant influence on the success of community websites developed as part of the CGDN Scheme, many of which are supported by the literature. Some are a result of the top-down approach taken to developing community websites; others are a result of the decisions made by the community website. We must also note that many elements contributing to the success of a community website are influenced by the community for which it is designed. In some cases, thoughtful planning can lead to the design of a community website which enhances the community. However, community perceptions that have been established in response to previous similar projects cannot be controlled or eliminated. Such negative perceptions as those held in Wollongong are common in many communities (Millen et al., 2002), and they must be acknowledged and actively managed if a community website is to succeed in such a community.

## **8.8 Findings relating to the CGDN Scheme**

### ***8.8.1 Recommendations for the CGDN Scheme***

Initial proposals for the **CGDN Scheme** were based on the concept of 'community': community control, community cohesion, community enhancement, community

building and community benefits. While not all documented in the CGDN Policy, a number of features were considered essential by the writers of the One City One Site Working Party proposal (McGuire, 2004b). These features are presented in Table 8.4 below. The table indicates whether each feature has been implemented to date, and provides recommendations related to each feature in regard to the CGDN Scheme.

It is important to note that, even considering the lack of coordinated promotion for the **CGDN Scheme** nationally, there was extremely low uptake of the CGDNs in their first year of availability. Of the 22,000 CGDNs available (.au Community Domains Trust, 2006b), communities expressed an interest in only 255 of these domain names (approximately 1%) (.au Community Domains, 2007b), confirming awareness was low. However, only 14 CGDNs were in use one year after the national launch (.au Community Domains, 2007a), representing about 5.5% of the domain names for which any interest had been expressed and only 0.06% of the available names. This suggests that, even once community awareness is achieved, there are significant difficulties associated with moving from ‘interest’ to ‘action’. Based on the recorded experiences of individuals involved in the **CGDN Scheme** trial, it is likely that the implementation of the recommendations below would reduce these difficulties.

*Table 8.4: Current Implementation Details and Recommendations Relating to CGDN Scheme Features*

<i>Feature</i>	<i>Implementation to date</i>	<i>Recommendation</i>
Collaboration between communities	The Wollongong and Bathurst communities collaborated. This was done without the support or guidance of auCD.	auCD has established an online forum where individuals can post discussion questions. This concept should be extended, establishing mechanisms which allow communities to share documentation and advice in a more structured way, and to allow communities facing similar challenges to support each other directly.
Create defined boundaries for each CGDN	The physical geographic boundaries assigned to each CGDN were formally defined. However, in practice, members of communities do not define themselves by formal boundaries. When implemented, auCD has permitted Community Website Groups to allow membership from individuals outside the formal geographic boundaries, on the condition that the majority of members live or work within the formal boundaries.	Formal boundaries are necessary to define each CGDN, due to the legal requirements for the majority of members to be within the specified geographic boundaries. The current flexibility in membership should be maintained to allow everyone who considers themselves to be part of that community to become a member.
Coordinated sourcing of funding	No coordinated source of funding has been established. The sale of geographic names in com.au and net.au was proposed as a source of funding for the CGDNs. However, communities have not received any of this money.	Ideally, communities should be provided with a small amount of seed funding to cover initial promotion and meeting costs. However, if this is not possible, auCD should provide each Community Website Group with information about possible sources of funding, such as community grant scheme, local and state government funding opportunities, and auCD-run funding schemes.

<i>Feature</i>	<i>Implementation to date</i>	<i>Recommendation</i>
Development of resources that can be shared across communities	The CGDN proposal included provision of detailed support and resources free of charge. auCD has made a limited number of resources freely available through its website. Community Website Groups are required to pay for detailed support and resources (such as website templates).	auCD should develop extensive and detailed resources and these should be provided free of charge. auCD was established as a not-for-profit organisation to manage and support the CGDNs, and was funded by the sale of geographic names in com.au and net.au. It also receives a fee for each CGDN registered. Therefore, it should not charge for the provision of resources.
Simple documentation	It is essential that each applicant demonstrates their eligibility to license a CGDN. However, the amount of paperwork and complex application procedures currently used place a heavy burden on a new, not-for-profit organisation run by volunteers.	The application procedure should be simplified and the paperwork minimised to decrease the burden on volunteer workers. Some of the current sections of the application process (e.g. detailed business plan, website structure) could be due six months after receiving the domain name to allow those involved to see progress and to have greater time to complete them.
Clear guidelines from auCD / auDA	The only formal documentation related to the CGDNs and their usage is the CGDN Policy. There is a lack of clear guidelines from auCD and auDA about the processes and tasks that each Community Website Group must undertake, and how these should be conducted.	auCD should develop clear and simple documentation for Community Website Groups that: <ul style="list-style-type: none"> <li>- explains the processes and tasks that must be undertaken</li> <li>- suggests appropriate timeframes</li> <li>- explains how to conduct each process/task</li> <li>- advises who to contact if you have questions or issues</li> <li>- provides examples where appropriate.</li> </ul>
Coordinated promotion	The proposal highlighted the need for a national, coordinated approach to the promotion of the CGDN Scheme. No broad awareness campaigns have been conducted. A roadshow was conducted directly after the national launch of the CGDNs, and sporadic meetings about the CGDN Scheme have been conducted in rural Australia.	A national awareness campaign should be conducted using mainstream media to promote the CGDN Scheme and its potential benefits to all Australian communities.

Since August 2007, auCD has implemented (at least partially) the recommendations above relating to the development of resources and simplification of documentation. As auCD has responded to community feedback, interest in the CGDNs has increased and by February 2008, 36 community groups had been approved to use a CGDN.



The implementation of the **CGDN Scheme** through the three test cases demonstrated that the **CGDN Scheme** and Policy have the ability to produce successful community websites, subject to a range of other factors within the community and the management group. The combination of the extensive, thoughtful planning and broad community engagement in Bathurst resulted in a successful implementation of the CGDN Scheme. While the Wollongong test case was implemented within the boundaries of the original CGDN requirements (including conducting planning and attempting community engagement) the lack of initial funding and difficulty obtaining other funding limited the implementation of the plans developed. A community website was developed in Ballarat using external funding, however the process was not supported by the community and hence cannot be considered to be a successful implementation of the CGDN Scheme, since it did not adhere to the Scheme's requirements.

The experiences of the three test cases reveal that there are a number of elements necessary for the success of a community website developed under the **CGDN Scheme**. While the planning requirements of the **CGDN Scheme** provide a basis for potential success, planning alone does not guarantee success, as demonstrated by the Wollongong test case. Some level of initial funding is necessary to cover the cost of establishment and to support the planning process, however funding alone also does not guarantee success as demonstrated by the Ballarat test case. The **CGDN Scheme** mandates community **involvement** in the process, however true community **engagement**, present to some degree in Wollongong and to a greater degree in Bathurst, appears to be an essential element of success. Effective leadership is essential to pull all these elements together. A balance of planning, funding, community engagement and leadership is therefore necessary for a community website developed under the **CGDN Scheme**. Arguably, these features would be significant, if not essential, in the development of **any** community websites. It is important to note that, in summary, a top-down approach to community website implementation will only succeed when real communities are **engaged** at the local level.

### 8.8.2 *Lessons learned about the CGDN Scheme*

From the three implementations of the **CGDN Scheme** that have been studied, lessons<sup>3</sup> for those managing and modifying the CGDN Scheme have been identified. These lessons were established from the experiences of the communities and the CGDN managing bodies, and are supported by the critical reflections previously conducted (see Section 4.20, Section 5.16, Section 6.16 and Section 7.17).

The lessons presented below address the key issues identified throughout this research. While these lessons are likely to be applicable to all CGDN projects, some will be more significant than others for specific projects (Ripamonti et al., 2005).

- Lesson 1      The facilitator's knowledge of the community, prior engagement with local stakeholders, and enthusiasm about the project, all appear to positively contribute to the success of the CGDN website in the areas of community engagement efforts, completion of the CGDN application process and initial website implementation.
- Lesson 2      The culture of the community impacts on the success of a CGDN website.
- a. Previous experiences with community projects, and specifically community-focussed technology projects, appear to strongly influence community culture. This influence may be positive or negative depending on the success of the previous projects.
  - b. The size of the community, and hence prior relationships between community members, also appears to influence community culture. Greater familiarity between individuals involved appears to enhance cohesion among participants.
  - c. The willingness of key stakeholders to be involved in CGDN management groups appears to be positively influenced by close personal relationships within the community and by recognition of volunteer contributions.

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<sup>3</sup> The practice of developing 'lessons' from grounded theory is accepted practice in the Information Systems discipline. For one example, see Jones, S. and J. Hughes 2001, 'Understanding IS evaluation as a complex social process: a case study of a UK local authority', *European Journal of Information Systems*, vol.10, pp.189-203.

- Lesson 3      The establishment of community websites *without* external funding but *within* a highly structured scheme that requires significant preparation appear to be highly problematic.
- Lesson 4      The ability of each CGDN managing group to obtain access to external funding appears to be influenced by the facilitator of the CGDN website, the individuals who constitute the active membership of the CGDN managing group, and the culture of the community.
- Lesson 5      The more thorough the preparation conducted by the CGDN managing group prior to beginning website development, the greater the success of the CGDN website in the first 18 months.

## **8.9 Findings relating to the design of government-initiated schemes for community websites**

### ***8.9.1 Recommendations for government-initiated schemes for community websites***

This research aims to contribute to a deeper understanding of **government-initiated, structured community website schemes**. Based on the modest success of the CGDN Scheme to date, it can be concluded that a **government-initiated scheme** for community website development is certainly viable. This research has provided the opportunity to assess the principles, features and policy elements of the CGDN Scheme, and to establish general recommendations for the establishment of any **government-initiated, structured scheme** for community website development. These findings are presented in Table 8.5 below. They are divided into seven groups for ease of comprehension.

*Table 8.5: Recommendations for Government-initiated, Structured Schemes for Community Website Development*

Policy	<ul style="list-style-type: none"> <li>• Write policy documents in simple language that can be easily understood by community members</li> <li>• Develop supporting documentation that provides necessary instructions for community members to simplify processes</li> <li>• Minimise application documentation to reduce any unnecessary burden on volunteer workers, while still requiring communities to demonstrate sufficient planning to provide the basis for community website development and implementation</li> </ul>
Awareness	<ul style="list-style-type: none"> <li>• Managing body should conduct coordinated promotion and awareness campaigns at a state and/or national level</li> <li>• Build broad awareness at a community level prior to formal establishment of community website management group</li> <li>• Conduct on-going promotional and awareness campaigns at a community level</li> </ul>
Technical	<ul style="list-style-type: none"> <li>• Provide relevant basic technical advice/support (such as web templates) to community members (free of charge)</li> <li>• Encourage each community group to include members with technical skills to inform necessary technical decisions</li> </ul>
Governance/Leadership	<ul style="list-style-type: none"> <li>• Enforce policy requirements consistently, with specified and enforced penalties for policy breaches</li> <li>• Maintain a realistic level of flexibility to ensure that stringent policy requirements do not create ‘real world’ problems for community members</li> <li>• Provide guidance to support communities in their progress towards implementing their plans</li> </ul>
Participation	<ul style="list-style-type: none"> <li>• Build a critical mass of key members in each community, who will drive the implementation and keep up the momentum</li> <li>• Encourage the formation of a community group that collectively has a variety of skills</li> </ul>
Facilitation	<ul style="list-style-type: none"> <li>• Ensure each community has access to a well-trained, enthusiastic, self-motivated facilitator with a range of community contacts</li> </ul>
Funding	<ul style="list-style-type: none"> <li>• Assist each community to obtain seed-funding</li> <li>• Minimise licensing costs for the community website domains</li> </ul>

As explained in Section 8.8.1, community websites developed under the CGDN Scheme require a balance of thoughtful planning, at least limited funding, community

engagement and clear leadership to achieve success. Based on the experiences of community technology projects developed under various other schemes (such as Networking the Nation in Australia), it appears that these requirements are applicable to all projects developed as part of **government-initiated, structured community website schemes**. While the importance of each element is likely to vary based on the specifications of the scheme, each of these elements affects the success of each community project.

### ***8.9.2 Lessons learned about government-initiated schemes for community websites***

From a high-level assessment of the CGDN Scheme, in conjunction with an assessment of the literature, lessons relating to the design of government-initiated schemes for community websites have been developed as part of the grounded theory process. These lessons are supported by the critical reflections of the CGDN Scheme implementation (see Section 4.20, Section 5.16, Section 6.16 and Section 7.17) and by the literature.

The lessons presented are likely to be applicable to all similar projects; some will be more significant than others for specific projects (Ripamonti et al., 2005). It should be noted that many of the lessons below are applicable to all government-initiated schemes for community **technology** projects; they are not limited only to community **website** schemes.

- |          |   |
|----------|---|
| Lesson 1 | Timely and transparent processes for policy development and modification in government-initiated community technology schemes increase community perceptions of the scheme.           |
| Lesson 2 | The involvement of practitioners and researchers in government-initiated scheme policy development and modification increases the relevance and practicality of the policy documents. |
| Lesson 3 | Positive community perceptions of a government-initiated community technology scheme result in increased community participation and higher levels of available funding.              |

- Lesson 4      Government-initiated community technology schemes require a balance between accountability and support.
- a. While groups should be required to demonstrate their right to participate and their commitment to the ideals of the scheme, this process should include only the minimum necessary effort to reduce burdens on community groups.
  - b. The greater the accountability required (particularly in the application and early development stages), the greater the available (financial or in-kind) support required from the scheme implementers.
- Lesson 5      Compulsory planning for community technology projects developed within government-initiated schemes appears to increase the likelihood of a project's success. Such planning is therefore one appropriate inclusion in the participation requirements of a government-initiated scheme for community technology projects.
- a. Wherever possible, all documentation produced to demonstrate a community's right to participate in a government-initiated scheme for community technology projects should directly assist the community in their planning process.
  - b. Access to diverse skills appears to positively contribute to the success of community technology projects developed within government-initiated schemes. While planning and management skills are useful for all projects, other skills may be necessary for each government-initiated scheme.
- Lesson 6      Outcomes of similar implementations of community technology projects under the same government-initiated scheme will vary between communities, due to the impact of the culture of the community. All government-initiated schemes should therefore include an element of flexibility to allow projects to be tailored to the needs of the specific community.

- Lesson 7      A community's acceptance of a community technology project under a government-initiated scheme is influenced by the leadership of the project, the community's awareness and perceptions of the scheme, project membership, previous experiences with the relevant government body, previous experiences with similar projects, and the culture of the community generally.
- Lesson 8      Government-initiated schemes for community technology projects should provide detailed technology recommendations and support, or the actual technology itself, to minimise technical burdens on the community.
- Lesson 9      The leaders of a community technology project must be recognised by the community as well as by the government body initiating the scheme.
- Lesson 10     Community recognition and support for community technology project leaders is determined by the leaders' ability to understand the community and be sympathetic to the community's needs, and by the openness and accountability demonstrated by the leader.

### **8.10 Findings relating to the design of all community website schemes**

The recommendations and lessons presented above are specific to government-initiated community website schemes. Inherent in all government-initiated community website schemes is the development and implementation of policy to ensure accountability; both accountability of the communities involved and accountability of the government agency administering the scheme. While the recommendations and lessons regarding policy development and implementation are therefore not necessarily applicable to all community website schemes, most schemes will be defined and implemented under some type of policy. It could be assumed that all community websites which have developed to support the needs of a specific community will require certain common elements to be successful: planning, some funding, engagement with that community, and leadership to guide the process. Therefore, while minor variations may be necessary to adhere to the requirements of each specific scheme, the lessons presented in Section 8.9.2 are relevant to all community websites developed under some form of scheme.

## 8.11 Conclusion

The summary of the case studies' experiences presented in this chapter identified issues that affect the development and implementation of community websites, and described how the design of government-initiated schemes affects community website project outcomes, addressing *research goal v*.

This chapter began by presenting a summary of all **issues** identified during the trial of the Community Geographic Domain Names (CGDNs), and reviewed the occurrence of each **issue** across the CGDN Model and across the three case studies. Using grounded theory methods, **issues** were categorised and **models** developed to describe the relationships between **issues** and **factors**. The analysis of the **issues** (identified in **Chapters 4-7**) has confirmed the significance of the concepts cited in the literature (see Section 2.4.4 for the issues identified in the literature, and Section 8.7 for a discussion of the relationship between the issues identified in the literature and the issues identified in this research). Extending previous research, a new factor was explicitly identified to better represent those issues which affect the viability of community websites. Sections 8.2 and 8.3 allowed us to develop a deeper understanding of issues faced by groups developing community websites, addressing *research goal iv*.

The comparison of test cases in the **CGDN Scheme** trial provided insights into the implications of three **approaches to facilitation** (self-driven, highly facilitated, and company-driven), and varying **methods of implementation** within (and in some cases, outside of) the limitations of the **CGDN Scheme** and its governing Policy, addressing *research goals i and ii*. Based on the original features of the CGDN Scheme, and the implementation of these features to date, **recommendations** to improve the CGDN Scheme's viability were provided. From consideration of the principles, features and policy elements of the CGDN Scheme, general recommendations for the establishment of any **government-initiated scheme for community websites** were provided. These recommendations contribute to our understanding of the **issues** affecting government-initiated, structured community website schemes, and are useful for informing the establishment of such schemes.



The ultimate outcome of this chapter is the **lessons** learned about the CGDN Scheme and about community websites developed under government-initiated schemes for community websites, addressing *research goal iii*. These lessons are relevant not only for the test cases in this research, but for all communities developing community websites as part of some sort of scheme. The key elements highlighted by the findings are the need for thoughtful planning, at least minimal funding at the initial stages, true community engagement, and informed leadership. It must be noted that any type of top-down approach to community website implementation (and, one may speculate, any community project implementation) will only achieve true success if the community members are engaged with and committed to the process.

## **Chapter 9: Conclusion**

### **9.1 Introduction**

This chapter provides a summary of the research presented in this thesis. The research set out to develop a deeper understanding of the issues associated with government-initiated, structured community website schemes, through one instance of such schemes: the Community Geographic Domain Name (CGDN) Scheme. This CGDN Scheme is a new Australian model for promoting and supporting the development of community websites. The key issues identified in this research are briefly summarized, and an overview of the significance and limitations of the research provided. This chapter concludes with suggestions for future research directions and general conclusions after consideration of the limitations of this research.

### **9.2 Summary of Key Issues**

While many individuals would willingly use and contribute to a community website that they felt 'represented' and benefited them, and strong interest in such websites has been demonstrated (Australian Government, 2003a; Vrazalic et al., 2003) internationally there has been limited success in the establishment and viability of such community websites (Thompson, 2002, 140; Australian Government, 2003a; Australian Government, 2003b; Vrazalic and Hyland, 2005). The CGDN Scheme was developed with the idea of helping communities move onto the Internet, through the provision of structure and support for their activities. Despite these good intentions, we must ask: is the CGDN Scheme viable? Through this research, a series of issues with the CGDN Scheme, the CGDN Policy, and specific CGDN Projects were identified. These issues inform the assessment of the CGDN Scheme, and the wider awareness of the issues associated with government-initiated, structured community website schemes.

The experiences of the three CGDN Projects revealed many areas of the CGDN Scheme that allow for potential success. As stated in the literature (Vrazalic and Hyland, 2004), the compulsory planning and establishment of broad community links, prior to applying for a CGDN licence, ensure community groups are committed to the

process and understand the implications and requirements of managing a community website. However, the planning process also demonstrated the difficulties associated with establishing aims and priorities for projects that are joint ventures between multiple bodies, as previously presented in Day (2002) and Stoecker (2005b). The source of funding for each CGDN Project influenced the aims and prioritisations, as well as the technological choices made, supporting the previous research of Guthrie and Dutton (1992). The test cases' experiences supported the previous claim that full community ownership was positively associated with success (Romm and Taylor, 2001). The positive impact of community ownership and community cohesion on the viability of community informatics projects, as described in Romm and Taylor's (2001) Autonomy/Harmony Model, was confirmed by this research.

The experiences of the case studies reinforced previous claims about the importance of community involvement (Fisher and Craig, 2004), communication (Donovan et al., 2002) trust (Mieszkowski, 2000) and a sense of belonging (Day, 2002). Establishing a high level of community interest and support was a common issue faced by the three test cases, with both commercial and non-commercial support aiding in their success. While the CGDN Scheme was implemented to enhance community interaction and prosperity, the Ballarat case study demonstrated that it is also possible for projects such as these to lead to division among community members, supporting the findings by Gurstein (1999 cited in O'Neil, 2002).

While each of the three CGDN Projects was required to have a designated facilitator in order to participate in the CGDN Scheme trial, the varied behaviours of the facilitators were shown to have a major impact on the success of the CGDN Project. This finding confirmed the experiences of other researchers working in the Community Informatics domain (Beamish, 1995; Mieszkowski, 2000; Donovan et al., 2002; Millen et al., 2002; Muylle and Basu, 2004; Vrazalic and Hyland, 2004; Ripamonti et al., 2005). Facilitators with close ties to the community are likely to be more able to identify key stakeholders and establish links with these stakeholders. Proactive facilitation minimises the burden on volunteer workers, and ensures the planning, paperwork and website development remains focussed and on schedule. However, it is important to allow 'the community' to maintain control. Group composition also has a significant influence on the success of a community website,

supporting the findings of Sullivan et al. (2002). Larger community groups with members from diverse backgrounds had greater success in this study, as found by Wang and Fesenmaier (2004). This was largely attributed to their access to broader knowledge, such as business planning, promotions, legal advice, and website development and hosting.

One major advantage of the CGDN Scheme is the legitimacy that is provided by the consistent naming structure of the CGDNs. Such naming structures should be considered in future implementation of government-initiated, structured community website schemes. Given the inherent value of such domain names, it would not be unreasonable to expect communities to demonstrate a commitment to the principles associated with such schemes by meeting some formal application process. However, in practice, the extensive burden of paperwork and financial costs early in the CGDN Scheme process are likely to deter true 'community' groups, consisting entirely of volunteers and with limited or no funds. Despite proposed state and national websites to provide a central access point for all CGDNs, these have not eventuated. The provision of free resources and tools to assist communities in website development did not occur. Rather, auCD initially developed tools that community groups had to pay to use. Recent developments have seen auCD receive an additional \$100,000 in funding, and a significant reduction in the cost of website development tools to communities (.au Community Domains, 2008c). Increasing access to resources appears to have had a significant impact on community interest in the CGDNs, with enquiries and registrations increasing since this time.

Research suggests that the establishment of a community website in a commercial environment requires significant financial and technological resources (Fisher and Craig, 2004). The sale of geographic names in com.au and net.au, which provided direct competition to the CGDNs during the CGDN Scheme trial, changed the environment in which future CGDN Projects will be developed. While access to and ownership of CGDNs is restricted to community groups, anyone meeting basic domain name registration guidelines is able to purchase a geographic domain name in the com.au or net.au domain spaces. It is likely that groups establishing a CGDN website will have to invest greater resources in the future, than they would have, prior

to the sale of the geographic com.au and net.au domains, in order to develop a successful CGDN website, due to the commercial nature of the space.

The trial of the CGDN Scheme was conducted to test the CGDN Policy and suggest modifications based on the experiences of the CGDN Projects. However, during and after the trial process, auDA made numerous modifications to the CGDN Scheme, CGDN Policy and the associated processes without consultation with the trial communities. Community feedback was ignored and in some cases the changes made were in direct contradiction to community advice. These problems were compounded by the poor relationship between auCD and the CGDN Projects.

While the CGDN initial proposal had received wide community support, there was slow uptake of the CGDNs after the national launch in August 2006. One year after this launch, communities had expressed an interest in 255 of the 22,000 CGDNs available (about 1%) (.au Community Domains, 2007b), but only 14 were in use (.au Community Domains, 2007a). This usage was about 5.5% of those CGDNs for which interest had been expressed, and only about 0.06% of all CGDNs available. The lack of support and resources provided by auDA and auCD hampered community enthusiasm about the CGDN Scheme.

However, in late 2007 auCD recognised the slow uptake and sought to implement some changes recommended by community members and documented in this research. These changes included reductions to the required documentation necessary to make an initial application, reductions in the cost of website development tools, and greater networking support for communities involved in the process. By February 2008, 36 community groups had been approved to use CGDNs, and most of these had active community websites. In total, the population covered by the approved CGDNs is approximately 650,000. Another 13 community groups had applications for CGDNs pending, and a further 48 communities had indicated their intention to apply. In addition, communities had expressed an interest in 208 of the remaining CGDNs. The electronic newsletters sent by auCD reach 805 subscribers (.au Community Domains, 2008c). By late May 2008, 51 CGDNs were active or under development (.au Community Domains, 2008a; .au Community Domains, 2008b). Based on the increase in public interest and engagement, the changes made to the implementation

of the CGDN Scheme since August 2007 have increased the Scheme's likelihood of longterm success.

When considered independently of the CGDN Scheme, the case studies of the three communities attempting to build community websites highlighted issues found across the Community Informatics space. The communities experienced tension between 'grassroots' community activity and the need for funding (similar experiences were described in Beamish, 1995; Millen et al., 2002; Fisher and Craig, 2004; Muylle and Basu, 2004; Fisher and Craig, 2005; Ripamonti et al., 2005). While participants were highly motivated and committed to the community websites, these individuals were also typically involved in many other community-based activities in a volunteer capacity. As a result, each had limited time to commit to the project, and ensuring that website content (such as the events calendar) was current was a constant concern (as previously recorded in Fisher and Craig (2004)). Maintaining a sufficient level of membership was problematic. While the core group of initiating members remained committed to each CGDN Project, high turnover of fringe members was common. This finding supports the work of Tanner (2005) and Ripamonti et al. (2005).

All case studies experienced some level of difficulty in achieving representation from a broad cross-section of the community. This was particularly challenging in the community with the greatest cultural and socio-economic diversity. The impact of the social context, as discussed by Guthrie and Dutton (1992), Borgida et al. (2002) and O'Neil (2002), was confirmed in this research, with those case studies intent on maintaining a community focus being more successful at engaging members of the community. Interestingly, the auCD General Manager considered that the test case with the lowest level of community involvement was the most successful, because it had the greatest access to funding. (This suggests that auCD's criteria for 'success' was financially-based, not community-based.) The experiences of the case studies also support the claims by Donovan et al. (2002) that broad community involvement is more accessible in smaller communities, and that larger communities experience more difficulty meeting the varied and competing needs of community members.

Tonn et al.'s (2001 cited in O'Neil, 2002) finding that most community websites that are run by non-profit groups act simply as a gateway to other websites was supported

by this research, with the websites developed by the three case studies containing little content. Varied success was achieved in sharing information with existing organisations and websites. In particular, the Bathurst test case provides evidence contrary to Thompson's (2002) claim that competing organisations are unlikely to collaborate. Discussions about censoring content were conducted by the test cases, in an effort to balance the need for diversity with the desire to be respectful of all community members (as explained by Day (2002)). Ripamonti et al.'s (2005) identification of the need for appropriate technical infrastructure was confirmed by the experiences, however in one case study the focus on technical infrastructure was maintained to the detriment of other areas necessary for the CGDN Project. The problems associated with the development process and technology selection in all three case studies supported Fisher and Craig's (2005) findings.

Despite strong commitment in the early stages, it is questionable whether these community projects will continue in the long-term unless a formalised management structure is established and funds are available to pay for maintenance of the community websites. This research confirmed the difficulties related to funding that were previously identified in the literature (Yiftachel and Hedgcock, 1993; Vrazalic et al., 2003; Vrazalic and Hyland, 2004; Fisher and Craig, 2005). The CGDN Scheme's requirements for financial planning demonstrated that those involved in the planning of the CGDN Scheme had an awareness of the need for accountability in the delivery of funding (London Advice Services Alliance, 2003; GrantStation, 2004).

While a formalised management structure would be likely to minimise many of the difficulties experienced by the test case communities, any such approach to management is an *extension* of the top-down approach already taken in the CGDN Scheme. In contrast, it could be argued (with the support of much of the literature in the Community Informatics field) that the most appropriate way to proceed is to *reduce* the amount of formal management in place for the community websites. This would permit greater community input and control, allowing the community website to develop in response to community needs rather than as a result of the demands of an external body.

The findings of this research reveal that the CGDN Scheme does not necessarily result in the production of viable community websites. Despite the restrictions placed upon communities receiving a CGDN licence, the test cases have demonstrated that internal and external issues faced both before and after receiving access to the CGDN itself impact on a community website's long-term viability.

However, it may be argued that many features of the CGDN Scheme suggest that the CGDN Scheme itself is viable, thereby addressing *research goal iii*. The potential for increased CGDN Scheme viability, and the viability of the CGDN Projects, are likely to be enhanced by addressing issues identified in this research. This potential for increased viability has been demonstrated by the increase in uptake since the implementation of recommended changes in August 2007. Some of these issues faced by the test cases are addressed in the CGDN application documentation, encouraging applicants to consider these prior to applying for a CGDN licence. With greater support given to communities during the website development stage, and a higher level of publicity of the Community Geographic Domain Name space, the chance of success is likely to increase. The experiences recorded during the CGDN Scheme trial, identified throughout **Chapters 4-7** and discussed in **Chapter 8** of this thesis, should be considered when establishing any government-initiated, structured community website scheme in the future. Many of these experiences are largely specific to the CGDN Scheme. Recommendations relating to CGDN Scheme-specific issues, and lessons we have learned about the CGDN Scheme (informed by the reflections throughout **Chapters 4-7**), were presented in Section 8.8. These findings contribute to a deeper understanding of the issues affecting government-initiated, structured community website schemes, which were presented in Section 8.9. While there are difficulties associated with generalising the results of this research too broadly, Section 8.10 provided a discussion of the findings of this research as they relate to the development of all community website schemes.

This thesis achieved the five research goals it set out to accomplish:

- (i) To monitor the development of the national CGDN Scheme and Policy in Australia



- (ii) To compare and contrast various approaches to developing community websites within a government-initiated scheme, as observed through the CGDN Projects
- (iii) To evaluate the viability of the CGDN Scheme as an instantiation of government-initiated, structured community website schemes
- (iv) To develop a deeper understanding of issues faced by groups developing community websites
- (v) To understand how the design of government-initiated schemes affects community website project outcomes

### **9.3 Significance of this Research**

This thesis has evaluated the viability of the CGDN Scheme, which was developed to address a lack of structure and support for the development of community websites in Australia. In doing so, this research has made a contribution to the existing knowledge about issues affecting the viability of community websites developed under a government-initiated, structured community website scheme. However, it provides a unique perspective by comparing three communities working under standard guidelines. This has allowed the impact of issues to be considered, compared and contrasted more accurately by removing some elements of uncertainty. As such, it contributes to general *Community Informatics researchers* and to *Community Informatics practitioners* working directly with communities.

The findings of this research are directly applicable to the CGDN Scheme, and are therefore essential for informing future decisions made about the scheme by the *CGDN management bodies auDA and auCD*. Early findings of this research were used as the basis of CGDN Policy changes, however the experiences of the three test cases suggest that further changes to CGDN processes and management are necessary. These proposed changes have been outlined and justified in this thesis. Since August 2007, more of the recommended changes have been implemented in the CGDN Scheme. There has also been a significant increase in community interest in the CGDNs since this time, indicating that the changes may have improved the relevance and appeal of the CGDN Scheme to Australian communities.

Strong international interest has been expressed in the CGDN Scheme. As *governments* and *policy makers* around the world move towards standardisation and support for community websites, the experiences of those involved in the CGDN Scheme development and CGDN Project test cases will be highly useful, both to identify areas of success and to consider options for improvement. The findings provide a model of issues caused by the practical implementation of the CGDN Scheme, and demonstrate the importance of a realistic approach for these governments and policy makers. This research also provides a warning to policy makers about the importance of community involvement in developing policies to govern socio-technical schemes.

The case studies have provided a realistic insight into the process of community website initiation and development under the CGDN Scheme, which is highly useful for *communities considering beginning a CGDN Project*. While based on the experiences of the three CGDN Project communities, the findings of this research are largely applicable to *communities building community websites*, and to more *general socio-technical community-based projects*. **Chapters 5-7** present detailed accounts of the experiences of these communities, which are then summarised and discussed in **Chapter 8**, resulting in the articulation of lessons learned from this research.

## 9.4 Limitations

The research presented in this thesis has some inherent limitations, including:

- Only a single model of government-initiated, structured community website development was evaluated. There were a small number of weaknesses inherent in the CGDN Scheme, including the top-down approach taken. (These limitations have been discussed throughout this thesis.) However, the CGDN Scheme is the only such model in existence. It has been observed by Internet policy makers from many countries, due to its unique creation of a domain name space solely for communities.
- Three case studies of communities were conducted. While a larger number of case studies may have provided greater variety in the data collected, the trial of the CGDNs involved only three communities. At the time of evaluation, these three communities had exclusive access to CGDNs. The trial was

conducted to inform CGDN Policy development before the CGDNs became publicly available.

- Due to the geographical scope of the CGDN Scheme, the research was limited to Australian communities, and hence to a single cultural context.
- The case studies were observed over a three-year period, which was the length of the CGDN Scheme trial. Due to time limitations imposed upon this research, it was not possible to observe the case studies over a longer period. However, on-going observation of the three trial communities in the post-trial phase may provide more detailed and accurate feedback on the viability of community websites developed under the CGDN Scheme.
- The experiences of communities involved in the CGDN Scheme after the trial were not observed in this research. While post-trial observation was not a goal of this research, it would be interesting to observe post-trial CGDN Projects and compare their experiences to the experiences of the three trial communities.

## 9.5 Future Research Directions

Based on the findings of this research there are a number of future research directions that can be taken. These include:

- *On-going evaluation of the CGDN Project case studies* to develop an understanding of the long-term sustainability of the community websites, and provide a more informed assessment of whether the CGDN Scheme results in, or facilitates, the development of viable community websites
- *Evaluation of **new** CGDN Projects* established under the final CGDN Policy, to determine the viability of community websites when they are developed outside of the CGDN trial environment.
- *Evaluation of other government-initiated, structured community website models* to compare and contrast their success with the CGDN Scheme considering differences in policy, processes and culture, and determine the value of the domain name structure to the community websites.

- *Extension of proposed models* using confirmatory factor analysis or similar methods to determine the importance of each issue and factor described, resulting in more pragmatically useful models.
- *Application and evaluation of lessons* to determine their completeness for the CGDN Scheme, for government-initiated community website schemes, and for community website schemes generally.

## 9.6 Conclusions

This thesis set out to develop a deeper understanding of the issues associated with government-initiated, structured community website schemes, specifically through the evaluation of the Community Geographic Domain Name Scheme. A trial of the CGDN Scheme has determined that it has inherent value and is viable, however its implementation requires continued improvement if communities are to gain maximum benefits. The issues faced by the CGDN Scheme trial communities highlighted not only flaws with the CGDN Scheme, but universal issues faced by communities attempting to develop community websites that support local community under government-initiated, structured community website schemes. The development of an extended model of the factors and issues influencing community website viability, and the refinement of the lessons learned from this research, have enormous potential to assist in the development of individual community websites and in the development of national or regional schemes to support community websites.

A series of issues relating to the CGDN Scheme and CGDN Policy, and their implementation, have been identified:

- Even in the few years since its inception, many changes have been made to the CGDN Policy. auCD's unwillingness or inability to enforce the requirements specified in the CGDN Policy has been demonstrated through the CGDN Scheme trial.
- The policy drift experienced during the CGDN Scheme trial alienated stakeholders, and delayed the implementation process, which in turn further alienated stakeholders. Policy makers for all schemes with goals similar to the

CGDN Scheme need to ensure adequate control. Without this control, it is not possible to ensure that policy drift does not occur.

- The three CGDN Project trial communities felt alienated due to a lack of communication and transparency in the CGDN Scheme, and continued delays in receiving access to their CGDNs. auCD should focus on increased communication and efficiency when interacting with CGDN Project communities.
- The top-down approach taken to implementing the CGDN Scheme has reinforced the separation between ‘management’ and ‘community’. This separation must be minimised (and preferably, removed) in order to allow the community members to feel a sense of ownership and control over their community website.
- An increase in resources available to the CGDN Projects, and coordinated promotion of the CGDN Scheme by auCD, would be likely to increase community interest and CGDN uptake. The increased provision of limited resources to participating communities since August 2007, and the increase in community uptake since this time, has already demonstrated the validity of this statement.
- Composition of any community group managing a CGDN Project has a significant effect on access to information and knowledge, such as legal resources, promotions, and technical ability. This, in turn, impacts on community website viability.
- Effective facilitation can increase community involvement, establish broad community support, and maintain focus on the CGDN Project. Poor facilitation leads to a lack of direction and potential failure of the CGDN Project.

Through consideration of such issues in the early stages of government-initiated, structured community website scheme establishment, future schemes have the potential to have high viability, and to facilitate the creation of viable community websites.

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## **Appendices**

Please see print copy for appendices