COMMUNITY BUILDING
VIA ONLINE COMMUNITIES AND REGIONAL WEB-PORTALS:

Helen Thompson
Centre Manager
Centre for Electronic Commerce and Communication
University of Ballarat, School of Business,
University Drive, Mount Helen,
P.O. Box 663,
Ballarat, Victoria, 3353 Australia
E-mail: h.thompson@ballarat.edu.au

Abstract

Despite a rise of interest in information communications technology (ICT) and in community informatics (CI) initiatives, these are not 'magic bullets' or 'quick-fix solutions' for SMEs or even larger organisations, communities, or industries (McGrath and More 2002). There is growing recognition of the need to go beyond anecdotal evidence and to assess more effectively the change brought about by providing access to and utilisation of ICT in communities. Denison et al. (2002) have presented a taxonomy which differentiates between various types of ICT and community networking initiatives. The application of this schema to a cluster of community informatics originating from the Central Highlands region of Victoria proves to be useful. A case study is then presented which reviews the evolution of one of the online communities within that cluster. The diverse factors which are involved in establishing sustainable online services are examined. Access to a comprehensive toolset specifically designed to meet the skills and infrastructure gaps which often exist in regional areas has been important. The active involvement of community members in designing, implementing and sustaining web-based services has also been important. By generating debate and discussion and by sharing the critical learning from specific cases it is hoped that others can be better informed about the major characteristics and the diverse factors which impact on the effectiveness and long-term sustainability of CI initiatives in a regional and rural context.

INTRODUCTION

Information communications technology (ICT) has been identified as a key enabler in the achievement of regional and rural success, particularly in terms of economic and business development. The potential of achieving equity of service through improved communications infrastructure and enhanced access to government, health, education and other services has been identified. ICT has also been linked to the aspiration of community empowerment where dimensions include revitalising a sense of community, building regional capacity, enhancing democracy and increasing social capital.

There has been strong support for the view that the information economy will play a seminal role in the growth of regional and rural Australia. Online capabilities and services have been promoted on the basis that they can build stronger and more viable regional communities with enhanced investment, employment and skills, and improved quality and convenience of life. ICT has been identified as providing opportunities to 'level the playing field' with access increasingly being seen as critical for both economic and social well-being. Benefits have been espoused in terms of 'location independence' and the end of the 'tyranny of distance' (Department for Information Technology and the Arts 1998; National Office for the Information Economy 2000; Multimedia Victoria 2002). In terms of enhancing community well-being, it has been argued that online capabilities can help to stimulate and reinvigorate geographic communities and communities of interest.

There has been considerable interest in promoting ICT and eCommerce uptake for small and medium enterprises (SMEs) with the role of local government in promoting SME

uptake receiving consideration (Romm and Taylor 2001). Summary case studies have been presented to demonstrate how individual businesses have adopted and benefited from ICT and eCommerce (see, for example, National Office for the Information Economy 2000; Papandrea and Wade 2000; Ernst & Young and Multimedia Victoria 2002). Less attention has been given to the uptake of online technologies by other sectors of the community.

A raft of government policies and programs has been launched and reports published and disseminated, based around the theme of ICT and online capabilities. However, a range of barriers continues to impede uptake, particularly in regional and rural areas. Issues which have been explored include the 'digital divide' and 'equity of access'. While it is has been argued that regional and rural communities require first class infrastructure to harness the power of ICT (Victorian Government 2002), others, perhaps more realistically, argue that the goal of true equity of access may never be achieved (Hunter 1999; Fong 2001). Hunter, for example, believes that regional Australia must stop 'talking down' its ability to participate in the new global economy (Hunter 1999, p. 3). Supply and demand and economies of scale 'will always ensure technology and therefore services will be rolled out in metropolitan areas long before they are even considered for regional areas (Hunter 1999, p. 1). 'If we wait for equity of access, we will wait forever' (Hunter 1999, p. 3).

Calls continue for regional communities to join the globalised, online world. These are supported by the view that success today is based less and less on natural resource wealth, labour costs and relative exchange rates and more and more on individual knowledge, skills and innovation. But how can regional communities 'grab their share

of this wealth' and use it to strengthen local communities (Simpson, 1999, p. 6)? Should communities be moving, as Porter (2001) recommends (for business), away from the rhetoric about 'Internet industries', 'e-business strategies' and the 'new economy' to see the Internet for what it is 'an enabling technology - a powerful set of tools that can be used, wisely or unwisely, in almost any industry and as part of almost any strategy' (p. 18)?

Recent Australian literature (particularly government literature) does indeed demonstrate somewhat of a shift in terms of the expectations of ICT and eCommerce (National Office for the Information Economy 2001; Multimedia Victoria 2002; National Office for the Information Economy 2002). Consistent with reflections on international industry experience, there is now a greater emphasis on identifying locally appropriate initiatives, exploring opportunities for improving existing communication and service quality and for using the Internet and ICTs to support more efficient community processes and relationships (Hunter 1999; Municipal Association of Victoria and ETC Electronic Trading Concepts Pty Ltd 2000; National Office for the Information Economy 2002).

However, in spite of a context where ICT and online capabilities are promoted as critical elements of potential success, few attempts have been made to draw together various intellectual streams of research with examples of community practice to gain a clear understanding of their contribution. Goggin (2001) identifies the need to redress apparent oversights in the literature dealing with online technologies and regional development. Denison et al. (2002, p. 1) recognise the need for research which clarifies many of the assumptions and unspoken expectations about how electronic tools

can be used by community groups and organisations. Black et al. (2000) make a specific call for research to be instigated to collect case studies that demonstrate how successful community-based Internet services can be established for socially and economically beneficial purposes.

This paper makes a contribution by disseminating information on the experiences of various groups and communities and their attempts to combine economic and social development with the uptake of ICT and online technologies. The critical importance of the characteristics identified by Denison et al. (2002) is demonstrated. These include high levels of ICT expertise, a client provider model, and a high level of social entrepreneurialism. The paper also highlights some of the systems and processes which have been established by the Centre for Electronic Commerce and Communications (CECC). It demonstrates how CECC has evolved as an organisation that assists regional initiatives, businesses, governments and community groups in developing ICT capacities and capabilities.

MAPPING ORGANISATIONAL ASPIRATIONS FOR ICT ENGAGEMENT

Denison et al. (2002) identify that many entities have deployed ICT to communicate and interact with their members, clients and the rest of the world. In an attempt to generate debate and discussion and to alleviate some confusion they constructed a community networking taxonomy to communicate the major characteristics and community utilisations of ICT in Australia. Five major categories of organisations are described: individual organisations; clusters of like organisations; cross-sectoral collections of geographically based entities; civic networks; and service and application

provider organisations. While these categories are not mutually exclusive the authors believe they provide a relatively good fit to the observed reality of the Australian community ICT scene (Denison et al. 2002). These organisational categories are then mapped against factors drawn from a review of community informatics evaluations in a number of counties. These dimensions include: enhancing strong democracy; increasing social capital; empowering individuals; revitalising a sense of community; and providing economic development opportunities (Denison et al. 2002, pp. 6-7). The matrix reproduced in Table 1 below serves to summarise the aspirations for ICT engagement of the identified groups.

Table 1. Explicit aspirations for ICT engagement

	Individual organisations	Cluster of like organisations intra-sectional	Collectives of neighbourhood stakeholders cross-sectoral	Civic Networks Government agency led	Service and application provider organisations
Enhancing strong democracy	Generally LOW	Generally LOW	HIGH	HIGH	HIGH
Increasing social capital	Generally LOW	Generally LOW	HIGH	HIGH	HIGH
Empowering individuals	Medium to HIGH	Medium to HIGH	HIGH	HIGH	HIGH
Revitalising sense of community	Generally LOW	Generally LOW	HIGH	HIGH	HIGH
Providing economic development opportunities	Generally LOW	Generally LOW	HIGH	HIGH	HIGH

Source: Denison et al. 2002, p. 7.

The Denison et al. taxonomy is applied in this paper by mapping the ICT activities of CECC and various client organisations. The goal is to determine whether the matrix schema might assist practitioners and policy-makers 'to be more focused and

aware in their policy development and program implementation and to have more realistic expectations of the different sorts of projects'. Further, whether the taxonomy can 'enable researchers to ask more relevant questions, and help to more accurately contextualise practices within the community networking landscape' (Denison et al. 2002, p. 10). A single case study is then presented to demonstrate how a service and application provider organisation can support community organisations and the general community in developing ICT capacities and capabilities.

MAPPING ASPIRATIONS FOR ICT ENGAGEMENT OF CECC

Individual organisations

Individual organisations generally utilise ICT services and applications to meet organisation-specific goals or to enhance business organisational processes (Denison et al. 2002). The online services of Matthew Tol and Associates (MTA)[1], Chartered Accountants in Ballarat, provide an example. MTA recently launched web-based services which were designed to assist both in attracting new clients to the firm, thus contributing to achieving the promotional and marketing goals of the organisation, and in empowering clients to access web-based taxation records and other relevant resources and services. The launch of the online client services for MTA represents a new avenue for clients to access specialist services. For MTA the incentive was to provide excellence in client service utilising the latest technology, but also to free-up staff from the less productive activities such as responding to repetitive telephone and email requests for basic client information. While enhancing client service was the primary motivation, some potential for economic development opportunities was also identified.

---

[1] www.mta.com.au

Clusters of like organisations intra-sectional

Denison et al. identify that clusters of like organisations are exemplified by 'virtual networks' where peak body organisations bring together groups within a specific activity area. One local example is the Central Highlands Export Community.[2] This community has launched 'virtual' services which have been designed to meet the goals of various regional development bodies and support agencies (such as representatives from Australian Industry Group, Austrade, Local Government and Regional Development Victoria), particularly in terms of inter-organisational communication and interaction. The GrowExport.com site incorporates a comprehensive database of the capabilities, training and other needs of over 200 firms who are exporting or aspire to export from the Central Highlands region of Victoria. While some information is accessible to the general public, much of the information is accessible only to the regional development agencies. The goal is to support them in better targeting their services using the information and communication platform and tool kit, which is now accessible for the constituent group.

Collectives of neighborhood stakeholders

Denison et al. identify collectives of neighborhood stakeholders as the 'classic community network manifestation' with these sorts of 'activities articulated in the work of Doug Schuler, the Blackburg Electronic Village, and the old freenet movement' (Denison et al. 2002, p. 9). A shared characteristic of this collectivity network is that they often draw on a community development model, provide a wide range of

---

[2] www.growexport.com

8

functionalities and are place-based. CECC has developed web-based systems which support a cluster of regional portal initiatives with examples including Ararat, Moorabool and Pyrenees Online.[3] More recent initiatives include the development of services for the Wendouree West Community Renewal project, as one component of a multi-million dollar project which aims to regenerate a public housing estate which is home to approximately 400 residents. The web-based systems are used for the collection, collation and storage of information on the skills and learning needs of community members. The goal in this project is to provide a means for matching employment and learning opportunities with the articulated needs and interests of residents.

Civic networks Government Agency Led

Denison et al. (2002) identify portals as a very visible manifestation of government aspirations for developing ICT capacity within individuals or organisations within a constituency. The Young Australian Rural Network[4] (YARN) is an initiative which is driven by the federal government both to develop ICT capacities among young people in rural industries and to provide a range of support functionalities and services to organisations to encourage involvement using web-based systems. YARN brings together communication and information activities of disparate organisations within one constituency. Multiple organisations and individuals participate via publishing event information, news stories, promoting opportunities for young people, joining discussion forums, submitting web-links and resources and by developing information sites for

---

[3] www.ararat.asn.au, www.mconline.com.au, www.pyreneesonline.com.au

[4] www.yarn.gov.au

organisations which provide support for young people in rural industries. More detailed information is provided in the case study below.

Service and application provider organisations

The final category of organisations described by Denison et al (2002) is service and application provider organisations. CECC is one organisation which has evolved to assist community organisations and the general community in developing ICT capacities and capabilities. While activities were initially concentrated within the Central Highlands and Wimmera regions of Victoria, the geographical area of focus has expanded as CECC has been engaged to deliver services that support statewide and national initiatives. The CECC team demonstrates the major characteristics as identified by Denison et al. (2002) which include high levels of ICT expertise, a client provider mode, and frequently, a high level of social entrepreneurialism.

Using the model schema which was proposed by Denison et al. (2002), Table 2 provides a summary of the explicit aspirations for ICT engagement. This provides a focus for differentiating between the objectives of various ICT related initiatives which involve individuals, organisations and membership based groups from various regional and rural communities.

Table 2. Aspirations for ICT engagement of CECC and Client Organisations

	Individual community organisations	Cluster of like organisations	Collectives of neighbourhood stakeholders	Civic Networks Government agency led	Service and application provider organisations
Examples:	*Matthew Tol and Associates*	*Central Highlands Export Community*	*Wendouree West Community Renewal*	*Young Australian Rural Network*	*Centre for Electronic Commerce & Communications*
Enhancing strong democracy	LOW	Generally LOW	HIGH	HIGH	HIGH
Increasing social capital	LOW	MEDIUM to HIGH	HIGH	HIGH	HIGH
Empowering individuals	MEDIUM to HIGH	MEDIUM to HIGH	HIGH	HIGH	HIGH
Revitalising sense of community	LOW	Generally LOW	HIGH	HIGH	HIGH
Providing economic development opportunities	MEDIUM	MEDIUM	HIGH	HIGH	HIGH

POLICY VISION

In Australia, there has been a vision for online services to be used to open up regional communities to the rest of the world. Government support has been seen 'as enhancing the competence levels of local economies and communities so they become strong enough to deal equitably in an increasingly open marketplace' (McGrath and More 2002, p. 40). Two Federal Government programs managed by the National Office for the Information Economy (NOIE) provide examples of the support which has been available. The Information Technology Online (ITOL) program aims to accelerate Australian adoption of business-to-business eCommerce and encourage collaborative industry based projects (McGrath and More 2002). The complementary, five-year $464 million program, Networking the Nation (NTN), was designed to help bridge the

gap in the level of telecommunications services, access, and costs between urban and non-urban Australia. Both programs have provided a funding source for initiatives, variously termed as portals, online communities, comprehensive gateways and regional websites (Department Communications Information Technology and the Arts 2001). Funding priority has been given to projects that offer regional aggregation of business, government and community services and provide interactive services to clients both within and external to a region (Commonwealth of Australia 2001).

While no formal evaluation of the NTN program has been published, a recent evaluation of the ITOL program explores the notion of online communities and reports on the success of portal projects (McGrath and More 2002). Findings indicate that most are not fully meeting original objectives. Unforeseen challenges during the course of project implementation have included technological problems; delays in legal agreements; slowness of industry and/or project beneficiaries to respond to the eCommerce initiative; and an underestimation of the time and effort required. For most, the plan to provide full online eCommerce capabilities (for example online ordering and payments) will not be achieved (McGrath and More 2002).

McGrath and More (2002, p. 67) observe that these potential online communities are 'evolving rather than having arrived'. Further, that despite the rise of interest in online communities these alliances are not 'magic bullets or quick-fix solutions for SMEs or even larger organisations, communities, or industries' (McGrath and More 2002, p. 67). However 'where commitment, compatibility, [and] shared strategic intent are at the heart of collaborative relationships, success and learning is much more likely to occur' (McGrath and More 2002, p. 68).

CENTRE FOR ELECTRONIC COMMERCE AND COMMUNICATIONS

The University of Ballarat (UoB) is a distinctive, dual-sector regional institution pre-eminently serving the Australian communities of the Central Highlands and Wimmera regions of Victoria. The UoB vision is to be a regional university of international standing, highly regarded by the communities it serves. UoB provides clear educational pathways between TAFE and Higher Education and offers a broad range of courses to meet the diverse educational and training needs of the region. The University also has a growing national and international focus. A key objective of the University is to provide leadership for the uptake of ICT in industries, local government and within and among regional groups. Through its activities UoB also seeks to contribute to the educational, social, economic and cultural well-being of the region.

The Centre for Electronic Commerce and Communications (CECC) contributes to these objectives by promoting the advancement of eCommerce, particularly in its practical application in regional and rural Australia. Since being established in 1998 CECC has built extensive partnerships and strategic alliances within and beyond the University region and developed and implemented a range of projects utilising information communication technologies. Different education and training strategies have been used by CECC to foster learning and to build social capital through ICT and eCommerce.

Through the implementation of a $409,000 NTN funded regional portal project (www.mainstreet.net.au) during the period 1999 to 2001, CECC gained an enhanced understanding of regional ICT needs. CECC also established significant

capabilities in developing, replicating and customising online services capable of meeting the specific needs of regional communities, groups and organisations. Diverse groups and communities now access online services through CECC. These include local governments, town based communities, membership based organisations, industry groups and small and medium enterprises. In almost all cases the websites, online communities and/or web-portals are meeting or exceeding the initial client objectives. Clients have strong ownership of their online activities, maintain their own web-based information and are committed to investing annually to maintain the shared infrastructure and services they access.

In the following section a case study for the Young Australian Rural Network is presented to demonstrate how one initiative within the cluster of community informatics initiatives has been implemented in a way that engages and involves constituents in the development and ongoing maintenance of an online community or portal type initiatives.

YOUNG AUSTRALIAN RURAL NETWORK

The Young Australian Rural Network (YARN) is an initiative of the Commonwealth Department of Agriculture, Fisheries and Forestry – Australia (AFFA). YARN is an interactive online community, a vehicle for young people working in rural industries to communicate directly with AFFA and with each other and to keep in touch, collaborate, share ideas and strengthen networks. The University of Ballarat was invited to submit a proposal for the development of YARN in June 2002 after AFFA identified the

involvement of CECC in projects including the MainStreet Regional Portal project[5], Ararat Online and Moorabool Online.

The establishment of YARN was supported by research undertaken during 2001 which sought to better inform AFFA about young people aged 18 to 35 years who represented one-third of all people working in rural industries. The research outcomes were subsequently communicated through a publication titled *Guidelines for Reaching our Clients – Young People*, which was launched in May 2002 (Department of Agriculture Fisheries & Forestry Australia 2002). This guide was designed to help AFFA staff members recognise opportunities to include young people in their work. In introducing the guide, Michael Taylor, the Department Secretary, highlighted some of the research findings:

> Our research tells us that this significant group is impatient with prevailing timeframes for government and industry policy development; is not enthusiastic about agro-political structures and decision-making; communicates differently; is more likely to be positive about the future of agriculture and their own future than their older peers; and, importantly, wants to roll up its collective sleeves and get the job done…This client group must be effectively engaged in our work because not only have they inherited our current agriculture, fisheries and forestry environments and the well-being of rural communities, they determine the immediate future of rural and regional Australia (Department of Agriculture Fisheries & Forestry Australia 2002, p. 2).

The research conducted for AFFA confirmed that the Internet represented a powerful communication channel for reaching young people. Of the 350 young people surveyed, 67 percent had access to the Internet with 50 percent using it at least weekly. Email was the preferred medium for communicating but websites were identified as a more useful way of accessing information, 'particularly for keeping up with industry information' (Department of Agriculture Fisheries & Forestry Australia 2002, p. 9). In terms of

---

[5] www.mainstreet.net.au

designing Internet communications, the need for interactivity was confirmed. There was also the continuing requirement to be mindful of slow download times in some areas (Department of Agriculture Fisheries & Forestry Australia 2002, p.15).

Respondents identified that while 'extensive use of links to other relevant sites on the Internet would be most likely to draw them back to a site…out-of-date websites were unlikely to get a second chance (Department of Agriculture Fisheries & Forestry Australia 2002, p. 15).

In June 2002 AFFA recruited a young person who would have the primary responsibility of researching and overseeing the establishment and ongoing development of an online community where 'ownership' would be shared between AFFA and young people in rural industries. The project objectives for YARN would include:

1. Promoting and supporting further networking amongst graduates of the various Young People in Rural Industries programs coordinated by AFFA.
2. Providing a two-way communication tool as a conduit for information flow between AFFA and its stakeholders, with communication ideally being equally initiated at both ends.
3. Serving as an information 'hub' for young people in rural industries to find further information on non-government organisations, network and groups, particularly by providing a facility for non-government youth networks to post information about their organisation on the site.
4. Serving also as a general dissemination tool for the Young People in Rural Industries

program (YPIRI program), in conjunction with the existing AFFA website (www.affa.gov.au).

While the intention was for AFFA to establish and maintain the site, graduates from various elements of the YPIRI program would determine the content, and as far as possible, the structure and facilities. AFFA clearly understood that functionality could be created (discussion forums, event calendars, web page building facilities, member listings etc.) but that an online community would not exist unless its members were actively involved and interacting with each other.

The framework for the online community for YARN would be developed by University of Ballarat through CECC. It was proposed in June 2002 that functionality would include six key elements as detailed in Table 3.

Table 3. Proposed functionality for YARN

Functionality	Description
Discussion Forum	Have your say, share information, ask questions, or just find out what people are talking about.
Event Calendar	Check out what events are available nationwide, promote your events and get free publicity on YARN.
News Page	Where you can submit news that you would like young people to know about.
People Listing	Look up who has been involved in AFFA's YPIRI program, and get in contact with them.
Have Your Say	On draft Government policy - by responding to draft policy posted on the site, or post information for consultation and feedback by young people.
Free Web Page	To promote non-government organisations for young people in agriculture, fisheries, forestry, food and natural resource management.

A key objective was to actively engage graduates of the YPIRI program in the initial and ongoing development of YARN. This engagement was informed by the preliminary research which identified that young people prefer to work on short-term projects. They want a stronger sense of developmental milestones, to know their contribution is valued and how their involvement can make a difference. Feedback was also required in order to maintain the interest and motivation of young people (Department of Agriculture Fisheries & Forestry Australia 2002, p. 15).

On the 7 July 2002, approximately one hundred YPIRI graduates were contacted via email and asked to contribute to an online survey that would gather their opinions on the features of an online community that they would find most useful. The results would inform the development of YARN, confirm whether AFFA's vision was appropriate and also test the level of responsiveness and interest which was generated. A prize of three music gift vouchers was offered as an incentive to encourage participation. One email reminder was sent during the two-week collection period. Results were collated, prize winners were announced and detailed feedback provided to all graduates on 25 July 2002. Table 1 summarises the responses to the five major functional elements of the proposed site.

Table 4. Website survey results for YARN

Type of Functionality	Very Useful	Somewhat Useful	Neutral, no opinion or unsure	Not particularly useful
	%	%	%	%
Events calendar	81	14	5	0
Member listing	69	31	0	0
Discussion forum	63	27	6	4
Document library	54	28	13	5

Site builder for non-Government organisations	46	36	9	9

In implementing the YARN project, the strategies of 'engage early' and 'communicate innovatively' were embraced. The subsequent response from graduates was consistent with the observations made through the preliminary research. Young people appeared more inclined to be involved where they could play a role in the direction setting/planning stage, rather than if they had simply been invited to participate at the consultative stage. 'That is, they want to be part of driving direction rather than reacting to it' (Department of Agriculture Fisheries & Forestry Australia 2002, p. 16).

When the survey results were disseminated, graduates were thanked for their participation and advised that AFFA would contact them during the next week to seek contributions of content for the site. Graduates were assured that submitting content would not be a complex process. Publishing information on the events calendar, news section, or providing information about the rural networks or organisations they were involved in, would be no more difficult than the online survey they had just participated in.   Regular communication with graduates continued throughout the very short development period for the YARN project. Graduates were, for example, provided with access to the development site and asked for feedback on its design, navigation and functionality. They each received individual user names and passwords and were given instructions on how to access the graduate area of the website and how to begin submitting content in the lead-up to the official launch of YARN.

On the 27 August 2002 the Federal Agriculture Minister Warren Truss 'added a cyber dimension' to the traditional Australian concept of a good YARN, when he launched the Young Australian Rural Network (YARN) in Canberra (Truss 2002, p. 1). He called for young people to:

> Get online and get involved. Take pride in your views, ideas and achievements. Watch the awareness grow amongst government and industry of your valuable contributions, and watch YARN grow with it (Truss 2002, p. 1).

Figure 1. YARN – August 2002

Initial publicity included the issuing a press release, direct email notification to key people such as the presidents and/or convenors of organisations for young people, and a front-page link and news story on the Federal Government entry point at www.fed.gov.au.

Longer-term promotion has been achieved through the fortnightly e-newsletter of the Rural Industries Leadership Section of AFFA and by providing all new graduates of the YPIRI program with publishing access on YARN. Organisations who use the 'site builder' tool also promote YARN through their web address.[6]

Site visitors are provided with multiple opportunities for active involvement, for example, by contribution or starting an online discussion, building a site, adding a link, publishing events or suggesting new items.

Figure 2. Opportunities for interaction through YARN

---

[6] See for example the Bush Capital Club at www.yarn.gov.au/sites/BCC

YARN has received over 260,000 hits in the twelve months since its launch, received 19,150 unique visits and provided site visitors with 53,137 page views. Figure 3 indicates that site visits initially fell from the levels experienced at the time of the site launch. During 2003 visitation statistics progressively increased with the most significant increase during March 2003. While increases in site visitation numbers have slowed, utilisation of the site has significantly increased as measured by the number of page views. The indication is that site visitors are staying within the site for a longer period.

Figure 3. Usage statistics for YARN August 2002 – July 2003
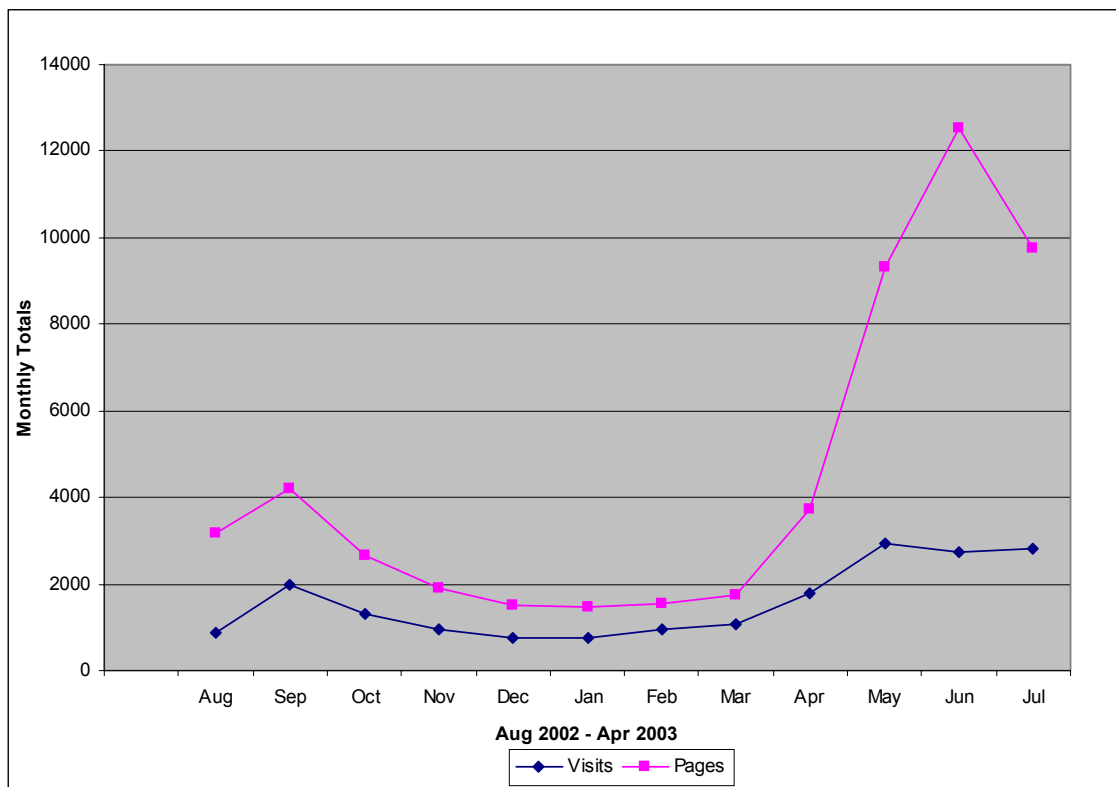
The services available through YARN have been progressively enhanced since its launch in August 2002 with the most recent expansion involving the development and

launch of GATEway, an opportunities reference database which has been incorporated into the site. This reference tool provides young people with a centrally housed information database of relevant government and non-government programs, awards, events and training opportunities. Initial content was contributed by members of the Young People in Rural Industries Working Group, but since the GATEway application has gone 'live' other agencies and organisations have been invited to publish information. While the application design is very functional it is simple to enter information and users are able to interrogate the database in a number of ways, for example, by using key terms or by entering one or more qualifiers to narrow their search as required. Selections can then be collated and printed in PDF quality format.

AFFA regularly review graduate and visitor feedback, site statistics and other available information to identify further opportunities for enhancement to continue to ensure that YARN meets the information and communication need of AFFA and young people in rural industries.

CONCLUSIONS

This paper initially examined the taxonomy which was developed by Denison et al. (2002) to differentiate various types of ICT and community networking initiatives. The application of the model schema has proved useful in differentiating between various community networking initiatives. The presentation of the case study for YARN then highlighted factors which are involved in establishing sustainable online services.

Access to a comprehensive toolset specifically designed to meet the skills and infrastructure gaps which often exist in regional areas has been important. The active involvement of community members in designing, implementing and sustaining web-based services has also been critical.

Important factors in the success of regional CI initiatives appear to be directly related to the level of ownership that can be provided to participants, the ability for multiple users to contribute, publish and maintain the web-based information, and, finally, the degree to which web-based applications are tailored to meet the particular business, organisation or community purpose.

Communities, just like businesses, require assistance in identifying the most appropriate online services for their particular circumstances. Service and application provider organisations can play an important role in developing ICT capacity. In the case of the University of Ballarat, CECC works with members of 'geographic communities' and 'communities of interest' to design and implement sophisticated web-based services, customized to meet their specific communication, promotional and/or eCommerce needs. Through this university/community partnership initiatives are then sustained by putting community members in charge of the management of their online community. Local ownership and the sustainability of infrastructure and technical support services have been achieved by effectively aggregating regional demand for portal services.

Many of the infrastructure and engagement challenges often experienced by online community and portal initiatives have been reduced by the availability of a comprehensive portal platform and through the development of

comprehensive support services such ongoing technical and project management.

Well-developed and well-implemented online services can make a positive contribution to the future of regional and rural communities. Policies which encourage communities to enter collaborative partnerships, and which leverage existing infrastructure, knowledge and learning should be seen as preferable to the funding or establishment of discrete or stand-alone initiatives.

There is a need for greater dissemination of the experiences and outcomes of online community and web portal initiatives in a range of community contexts. Case studies, such as the one presented in this paper, can be very effective in illustrating the benefits, impacts, influences and challenges that can be experienced in operationalising and sustaining regional CI initiatives.

References

Black, A., J. Duff, et al. (2000). Rural Communities and Rural Social Issues: Priorities for Research, A Report for the Rural Industries Research and Development Corporation, RIRDC Publication No 00/130. 2001.

Commonwealth of Australia (2001). Government Response to the House of Representatives Standing Committee on Primary Industries and Regional Services - Report of the Inquiry into Infrastructure and the Development of Australia's Regional Areas - Time Running Out: Shaping Regional Australia's Future. Canberra, Commonwealth Government.

Department of Agriculture Fisheries & Forestry Australia (2002). Guidelines for Reaching our Clients - Young People. Canberra, Commonwealth of Australia, viewed 16 May 2003,
<http://www.affa.gov.au/content/publications.cfm?Category=Young%People%in%Rural%Industries&ObjectID=71BF31EA-F44A-45B0-8702F253C31E31B3>.

Department of Communications Information Technology and the Arts (2001). Networking the Nation Board Annual Report. Canberra, Commonwealth Government.

Department for Information Technology and the Arts (1998). A Strategic Framework for the Information Economy: Identifying Priorities for Action. Canberra, Commonwealth of Australia.

Denison, T., G., Hardy, et al. (2002) Community Networks: Identifies, Taxonomies and Evaluations. Electronic Networking 2002 – Building Community Conference, Monash University, Caulfield Campus, Melbourne, Centre for Community Networking Research School of Information Management & Systems, Monash University.

Ernst & Young and Multimedia Victoria (2002). Victoria's E-commerce Advantage: E-commerce Case Studies. Melbourne, Government of Victoria.

Fong, G. (2001). Electronic Communities - Problems and Potential. Proceedings of the Inaugural Telstra Consumer Consultative Council Annual Forum, Sydney, 14 November 2001, Telstra.

Goggin, G. (2001). "Pump Up the Volume": Telecommunications and the Reinvention of Regional Communities. Telstra Consumer Consultative Council Annual Forum, Sydney, 14 November 2001, Telstra.

Hunter, A. (1999). Opportunities Through Communications Technology for Regional Australia. Regional Australia Summit, Canberra.

McGrath, M. and E. More (2002). Forging and Managing Online Collaboration: The ITOL Experience. Canberra, National Office for the Information Economy and Macquarie University.

Multimedia Victoria (2002). Connecting Victoria: A Progress Report 1999-2002. Melbourne, State Government of Victoria.

Municipal Association of Victoria and ETC Electronic Trading Concepts Pty Ltd (2000). Local Government - Integrated Online Service Delivery Strategy and Implementation Plan, Executive Summary - Final. Melbourne, Municipal Association of Victoria.

National Office for the Information Economy (2000). Where to Go? How to Get There 2000. A Guide to Electronic Commerce for Small to Medium Businesses. Canberra, Commonwealth of Australia.

National Office for the Information Economy (2001). B2B E-Commerce: Capturing Value Online. Canberra, Commonwealth of Australia.

National Office for the Information Economy (2002). The Benefits of Doing Business Electronically - eBusiness. Canberra, Commonwealth Government. 2002.

Papandrea, F. and M. Wade (2000). E-commerce in Rural Areas - Case Studies. Canberra, Rural Industries Research and Development Corporation.

Romm, C. T. and W. Taylor (2001). The Role of Local Government in Community Informatics Success Prospects: The Autonomy/Harmony Model. 34th Hawaii International Conference on System Sciences, Hawaii.

Truss, W. (2002). 'Media Release', Rural Young People YARN Online. Canberra, Department of Agriculture, Fisheries and Forestry-Australia, viewed 12 May 2003, <http://www.affa.gov.au/ministers/truss/releases/02/02210wt.html>.

Victorian Government (2002). Victorian Government Business Statement: Building Tomorrow's Businesses Today, Competitive, Innovative, Connected. Melbourne, State Government of Victoria.