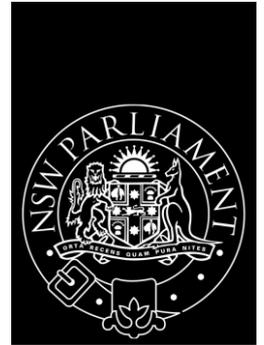LEGISLATIVE ASSEMBLY

Standing Committee on Broadband in Rural and Regional Communities

Transforming life outside cities

The potential of broadband services for rural and regional communities

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Committee terms of reference

The Legislative Assembly Standing Committee on Broadband in Rural and Regional Communities was established on 21 June 2007 to inquire into the needs of rural and regional communities in relation to telecommunications (including broadband) and other technology services and, in particular, to report on the following terms of reference:

a) The availability of telecommunications (including broadband) and other technology services in rural and regional communities; The benefits and opportunities for rural and regional communities of having access to telecommunications (including broadband) and other technology services;

b) Disincentives and barriers to the provision of telecommunications (including broadband) and other technology services to rural and regional communities; The consequences for rural and regional communities of not having, or not having adequate, access to telecommunications (including broadband) and other technology services, having regard to likely future industry and technological developments; and

c) Options for encouraging providers of telecommunications (including broadband) and other technology services to extend services to rural and regional communities.

Inquiry terms of reference

On 12 November 2009, the Standing Committee on Broadband in Rural and Regional Communities resolved to conduct an inquiry into the benefits and opportunities for rural and regional communities of having access to telecommunications (including broadband) and other technology services with a particular focus on:

a) improving government services and efficiency in service delivery, including in the areas of education, health, and justice services;

b) improving the level of engagement of rural and regional communities in public life through new technologies; and

c) investigating the potential economic benefits from new technology on commercial and business opportunities in rural and regional communities.

Chair's foreword

In a departure from previous committee inquiries, we have endeavoured in this inquiry to broaden the scope of our investigation to look at the benefits and opportunities for rural and regional communities having access to fast and reliable information and communications technology (ICT). This inquiry particularly focuses on improvements that fast and reliable ICT services can bring in accessing health, education, justice and in creating strengthened economies and community life.

There are benefits that all users of improved ICT services stand to gain. Many of these are of particular importance to people living in rural and regional areas of New South Wales. Improvements in ICT will significantly reduce the logistic and cost impediments that physical distance otherwise brings to so many aspects of life in non-metropolitan areas.

During this inquiry the committee heard about a number of current initiatives and pilot projects of the New South Wales Government which have focussed on introducing ICT advancements to assist rural and regional communities in the areas of health, education and justice. While the committee was impressed with these efforts, it is imperative that this good work continues and the New South Wales Government continues to invest in this area.

The committee also heard about the benefits that improved telecommunications services can bring to small and medium enterprises located in rural and regional areas. By ensuring that businesses, professionals, clients and communities are well connected and have opportunities to transform and grow, they can remain viable and sustainable into the future. As a result, rural and regional communities as a whole will become stronger.

In this report we have made a number of recommendations to ensure that the benefits of government service delivery are more broadly implemented across New South Wales. We have also recommended that those living in rural and regional areas of the state are given priority in the implementation of new technological advancements associated with greater access to telecommunications.

I wish to take this opportunity to offer my sincere thanks to my fellow committee members for their interest and contributions to this inquiry. In particular, I would like to thank the former Chair of the committee, Mr Paul Gibson MP. Finally, I would like to express my gratitude to the committee secretariat for their professional support and dedication to the work of the committee.

Sonia Hornery MP
Committee Chair

List of recommendations

Abbreviations

ACCAN	Australian Communications Consumer Action Network
ADHC	Ageing, Disability and Home Care
CENTROC	Central NSW Councils
CSIRO	Commonwealth Scientific and Research Organisation
CT scan	Computerised tomography scan
DBCDE	Department of Broadband, Communications and the Digital Economy (Federal)
DET	Department of Education and Training
DHS	Department of Human Services
DJAG	Department of Justice and Attorney General
EMR	Electronic medical record
GDP	Gross domestic product
GSAHS	Greater Southern Area Health Service
GWAHS	Greater Western Area Health Service
HNEAHS	Hunter New England Area Health Service
ICT	Information and communications technology
MRI	Magnetic resonance imaging
NEHTA	National e-Health Transition Authority
NBN	National Broadband Network
NBN Co	NBN Company Limited
RTIRC	Regional Telecommunications Independent Review Committee
SME	Small and medium sized enterprises
TAFE	Technical and Further Education Commission

Chapter One - Introduction

1.1 The Standing Committee on Broadband in Rural and Regional Communities was appointed to investigate the telecommunications needs of rural and regional communities with a particular emphasis on broadband access. Its terms of reference include: assessing the availability of telecommunications services, establishing the benefits of those services to rural and regional communities, identifying barriers and disincentives to service delivery and reporting on options for encouraging service providers to extend services to new areas.

Scope of the inquiry

1.2 On 12 November 2009, the committee resolved to conduct an inquiry into the benefits and opportunities for rural and regional communities having access to broadband services, entitled *Transforming life outside cities: The potential of broadband services for rural and regional communities*. This inquiry marks a departure from the scope of previous committee inquiries which have focussed on technological, infrastructure and service availability issues. Instead, this inquiry considers the potential benefits that improved and reliable telecommunications technologies and services can bring to rural and regional areas of New South Wales.

Rationale for the inquiry

1.3 The demand for access to fast and reliable information and communications technology (ICT) services is clearly on the rise. As the committee noted in a previous report, the use of internet in Australia has been rapidly increasing, with over 9.1 million internet subscribers active in December 2009, compared to 3.8 million subscribers active in September 2000.[1]

1.4 At the same time as this trend is the growing threat of a 'digital divide' between metropolitan and rural and regional populations. In previous inquiries by the committee, the lack of reliable telecommunications services prior to the rollout of the National Broadband Network (NBN) fibre footprint has been raised as an issue of ongoing concern for rural and regional communities. This comes at a time of increasing use worldwide of ICT for the delivery of government services, innovations in business and commercial activity, and participating in social and civic life.

1.5 The committee made recommendations in its previous reports on the kind of improvements to infrastructure and priorities in government action that will be needed to insure against a digital divide truly taking hold in New South Wales. This inquiry complements the committee's work to date by taking a closer look at how life outside metropolitan areas can be transformed with improved telecommunications services to rural and regional New South Wales.

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[1] Standing Committee on Broadband in Rural and Regional Communities, *Are you connected? Inquiry into telecommunications availability in rural and regional communities*, Report no.4/54, New South Wales Legislative Assembly, 2010, pp. 19-20

The inquiry process

Submissions

1.6   In November 2009, the committee called for submissions to this inquiry by advertising terms of reference and writing directly to key stakeholders. The committee received ten written submissions from state and local government agencies, businesses and individuals. A list of submissions can be found in Appendix One and copies of the submissions are available on the committee's website.[2]

Public hearings

1.7   The committee held public hearings in Sydney on 19 and 23 April 2010. It heard from telecommunications companies, key rural stakeholder groups, public sector agencies, representatives of local government and interested individuals. A list of witnesses can be found in Appendix Two and copies of the transcripts are available on the committee's website.

Visits of inspection

1.8   The committee conducted two visits of inspection during the course of this inquiry. The first visit was to the CSIRO Information and Communication Technologies Centre in Marsfield, Sydney, on 17 May 2010. The visit enabled the delegation of the committee to observe new technologies first hand and to discuss possible applications in rural and regional communities.

1.9   The second visit of inspection took place on 18 October 2010. A delegation of the committee visited the Downing Centre courts complex and Sydney Central Local Court to learn about the benefits that developments in telecommunications and broadband are bringing to the justice system in New South Wales. The visit enabled the delegation to see firsthand how videoconferencing was used for bail hearings and allowed the delegation to speak with staff about how the technology has improved the functioning of the system.

1.10   Reports on both visits of inspection made by the committee can be found in Appendix Three.

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[2] <www.parliament.nsw.gov.au/broadband>

Chapter Two - Government service delivery

2.1 Recent technological advancements have greatly changed the ways that images, voice and data can be transmitted and shared. It is now possible for simultaneous exchanges of information and real-time interactions to take place between people who are located remotely from each other. It is also possible for information to be stored centrally in electronic format and accessed as needed by multiple people from multiple locations.

2.2 The New South Wales Government increasingly delivers services by using a range of improved information and communications technologies (ICTs).[3] For example, the New South Wales Government submission to the committee stated that information on public transport in regional communities is now available via the internet where:

> improvements in electronic mapping and downloadable documents…allow the public to receive up-to-date information about [travel] routes and timetables, and allow for end-to-end journey planning across multiple modes of transportation.[4]

2.3 Many government services can now be accessed online, such as obtaining or renewing a trades, boating or fishing licence, registering a business name or obtaining a copy of a government publication.[5] These initiatives and the government's introduction of new telecommunications technology into the service areas of health, education and justice stand to particularly benefit people in rural and regional New South Wales.

Health

Telehealth initiatives in New South Wales

2.4 'Telehealth' is the use of telecommunications technology to deliver health services to patients who are located remotely from health care professionals. It has greatly changed the ways that patients can be diagnosed and clinically treated and the way that education and training can be provided for health professionals. Recent advances in technology mean that telehealth now encompasses preventive as well as curative medicine.

2.5 From as early as 1996, the New South Wales Government has introduced technological innovations to medical institutions across New South Wales including videoconferencing facilities, high resolution medical imaging and electronic medical records systems.[6]

2.6 The Department of Health reported to the committee that a range of integrated health services are being provided using these telehealth services, including:

> emergency care, critical care and medical retrieval, mental health, high risk foot care (diabetes management), wound management, brain surgery, aged care, renal

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[3] Submission 5, New South Wales Government, p. 3

[4] Submission 5, New South Wales Government, p. 9

[5] For example, the New South Wales Government's website <www.nsw.gov.au> provides links to a range of services and information from a number of departments and agencies

[6] Submission 5, New South Wales Government, p. 4

medicine, maternity, pathology, radiology, oncology, spinal cord injury services, and paediatric services.[7]

Videoconferencing

2.7   Videoconferencing is the use of technology that enables video and audio exchanges between two or more people who are physically distant from one another. Beginning in 1996, videoconferencing facilities for remote medical consultations were rolled out across the state with the introduction of telemedicine services generally.[8] The Department of Health reported to the committee that at least 624 medical facilities across the state now have the use of videoconferencing technology.[9] Justice Health also reported that twelve of the state's remote and rural correctional centres currently have telehealth systems in place which include the use of videoconferencing facilities.[10]

2.8   New applications of videoconferencing in health care provision continue to be trialled across the state's various Area Health Services, as discussed below:

Connecting Critical Care

2.9   The Connecting Critical Care program builds on lessons learnt from previous pilots such as the Virtual Critical Care Project that linked hospitals in Katoomba, Nepean and Lithgow. Under the Connecting Critical Care program, high-resolution cameras positioned above patients' beds in intensive care and high care units allow remotely located doctors and specialists to consult with patients and on-site healthcare teams.[11] Dr Robert Herkes, Intensive Care Unit Consultant at the Royal Prince Alfred Hospital and Co-chair Intensive Care Taskforce, explained to the committee:

> We are trying to build a network that connects all the regional hospitals into hubs in Sydney so that we can form a collaborative process. At the moment within Sydney the process connects the retrieval service, ambulance service, and Royal Prince Alfred and Royal North Shore, and the trial of the first initiative of this then connected Tamworth, Moree, Dubbo, Orange and Bathurst.[12]

Emergency Departments Pilots Project

2.10   Seven emergency department sites located within hospitals at Port Macquarie, Coffs Harbour, Kempsey, Grafton, Bellingen River, Dorrigo and Macksville have been linked together with video conferencing camera equipment. These facilities are then used to stream audiovisual, radiology and telemetry information to console sites within the participating hospitals. This information is used to assist doctors and other medical staff from smaller referring hospitals with their decisions about the appropriate referral, consultation and treatment decisions for their critically ill or injured patients.[13] Dr Herkes explained to the committee that the key advantage of

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[7] Department of Health, Response to questions taken on notice at hearing, 4 June 2010, p. 3

[8] Submission 5, New South Wales Government, p. 4

[9] Department of Health, Response to questions taken on notice from hearing, 4 June 2010, p. 3

[10] Ms Susan Harman, Transcript of hearing, 19 April 2010, p. 32

[11] NEHTA, *Case Studies: Bridging the critical care gap*, Sydney, 2010, viewed 9 November 2010, <http://www.ehealthforaustralia.com.au/what-is-e-health/case-studies/bridging-the-critical-care-gap/>

[12] Dr Robert Herkes, Transcript of hearing, 23 April 2010, p. 14

[13] Department of Health, *Connecting Critical Care – Emergency Departments Pilot Project*, Sydney, 2010, viewed 27 August 2010, <http://www.ncahs.nsw.gov.au/news>

the project was that the clinician in the isolated setting gets a significant clinical benefit from having the advice of the regional hub emergency department.[14]

Clinical Outreach project

2.11   The Clinical Outreach project extends the Critical Care Advisory Service run by Greater Western Area Health Service (GWAHS). The service originally began in July 2008 as a support service via telephone, email and fax for clinicians in smaller hospitals in the GWAHS to consult with regionally based critical care specialists. The expansion of this project through the installation of remote controlled high resolution cameras allows audio and video images to be conveyed to advising specialists based in Orange and Dubbo. This system also now allows the specialists to see and interact with the patient, family members and medical staff.[15]

Mental Health Emergency Care Support

2.12   Videoconferencing equipment was installed in the emergency departments of all Greater Southern Area Health Service (GSAHS) hospitals to enable mental health assessments to be made by specialist staff who are remotely located in three mental health support centre hubs in the GSAHS.[16] A similar program, entitled the Mental Health Emergency Care Rural Access Program, has also been implemented in the GWAHS. In this program, a specialist team based in Orange provides mental health assessments to remote and rural hospital emergency departments via videoconference links.[17]

2.13   Further advances in videoconferencing technology are also being piloted, such as the planned trials by Hunter New England Area Health Service (HNEAHS) of a hands-free videoconference system.[18] This type of device, previously used to provide frontline medical assistance in military settings, consists of a wearable mobile camera and headset. The device enables greater mobility for practitioners when examining patients, and can effectively convey real-time video feeds to medical specialists who can remotely direct and advise on appropriate medical treatment. Potential applications for this equipment include visits to a patient's home or at the scene of a medical emergency, particularly where medical expertise is remotely located.

High resolution imaging

2.14   The Department of Health has implemented the Picture Archiving and Communications System and the Radiology Information System in most of the eight Area Health Services across the state to improve handling and storage of high resolution imaging.[19] The systems enable diagnostic images such as ultrasounds, x-rays, MRI and CT scans to be captured and stored electronically. Clinicians can

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[14] Dr Robert Herkes, Transcript of hearing, 23 April 2010, p. 15

[15] Department of Health, *Clinical Outreach project gives small hospitals access to specialist medical advice*, Sydney, viewed 27 August 2010, <http://www.gwahs.nsw.gov.au>; Department of Health, *Annual Report 2008-2009*, Sydney, 2009, pp. 302, 303

[16] Department of Health, *Annual Report 2008-2009*, Sydney, 2009, p. 297

[17] Department of Health, *Greater Western project wins 2009 NSW Health awards*, Sydney, viewed 27 August 2010, <http://www.gwahs.nsw.gov.au>

[18] Department of Health, *High-tech health trial at AgQuip this week (17 August 2010)*, Sydney, viewed 19 August 2010, <http://www.hnehealth.nsw.gov.au/news/media_releases>

[19] Department of Health, *Annual Report 2008-2009*, Sydney, 2009, pp. 66, 235

then access the images regardless of where they are located or where the original test was conducted.

2.15   The Department of Health plans to further enhance this ability to share patients' digital images across health services with the Enterprise Archive project to be rolled out during 2010.[20] Digital imaging services using electronic facilities have also been introduced to public dental clinics in New South Wales.[21]

Electronic medical records

2.16   An electronic medical records, or 'EMR' system, has been introduced to hospitals across New South Wales to replace paper-based medical record keeping. For example, tracking patient admissions and discharges, ordering and obtaining results from pathology and radiology, and placing pharmaceutical orders for hospitalised patients can now all be done electronically.[22]

2.17   Extensions to the types of medical information that can be accessed from the state's EMR system are ongoing. For instance, the Department of Health is currently working to integrate the electronic records of the state Ambulance Service with state hospital EMR records to further enhance the kinds of information that authorised health workers can access.[23]

2.18   At a hearing, representatives from Justice Health reported their department's use of EMRs and digital imaging systems for sharing medical information between Justice Health facilities.[24] Currently, the Justice Health EMR system is separate from the Department of Health EMR system. The Department of Health told the committee that this was due to issues with maintaining the privacy of Justice Health patients.[25] Justice Health informed the committee that it is looking at alternative electronic medical file sharing arrangements with community-based health carers, to assist with ongoing treatment of prison patients once they are released back into the community.[26]

2.19   The Department of Health also reports that it is working to ensure medical information can be shared inter-state and on a national level. As Mr Craig Smith, Acting Chief Information Officer of the Department of Health, explained to the committee:

> I work with a national forum, the National e-Health Transition Authority (NEHTA) and all jurisdictional chief information officers across health in Australia. Using that forum, we consider points of integration through our own jurisdictional work efforts and the national agenda and work program that is in place through NEHTA.[27]

Telemetric patient monitoring

2.20   Telemetry in medical practice is where an electronic device is used to monitor a

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[20] Department of Health, *Annual Report 2008-2009*, Sydney, 2009, p. 43

[21] Department of Health, *Annual Report 2008-2009*, Sydney, 2009, p. 66

[22] Department of Health, *Annual Report 2008-2009*, Sydney, 2009, pp. 43, 234

[23] Ms Susan Harman, Transcript of hearing, 19 April 2010, p. 32

[24] Ms Susan Harman, Transcript of hearing, 19 April 2010, pp. 32-34; Mr Colman O'Driscoll, Transcript of hearing, 19 April 2010, pp. 32-34

[25] Department of Health, Response to questions taken on notice at hearing, 4 June 2010, p. 2

[26] Ms Susan Harman, Transcript of hearing, 19 April 2010, p. 34

[27] Mr Craig Smith, Transcript of hearing, 23 April 2010, p. 14

person's medical condition remotely, such as from the person's own home. The devices are typically used to assist patients self-monitor their chronic or ongoing medical conditions to ensure they are properly managed, such as in the case of a person managing diabetes or chronic heart illness.

Chronic Disease Management for Regional and Rural Communities

2.21   The HNEAHS received $5 million funding from the Federal Government, and $4 million from the New South Wales Department of Health to improve services provided to sufferers of chronic disease in rural and remote locations.[28] The project will link patients in their homes to health monitoring and support services. The Department of Health further advised that:

> The system provides service providers across the area with standardised care summaries, decision support tools and reminders about preventive care to allow them to ensure patients from all communities and disease groups receive coordinated and well managed treatment.[29]

Online medical education and professional development

Department of Health

2.22   In addition to the delivery of clinical medicine, telehealth facilities are used by the Department of Health to provide opportunities for medical staff to undertake training and education while they are situated in remote locations. Ms Kathleen Meleady, Director of Statewide Services Development at the Department of Health, told the committee:

> Telehealth facilities in NSW Health are significantly used for education, training and medical and nursing up-skilling. We estimate that up to 80% of the capacity of these systems are used for clinical services and training and education.[30]

2.23   Dr Herkes further explained how this enables medical professionals in rural and regionally-based hospitals to participate remotely in training and education that is being provided to their city-based colleagues. He told the committee that telehealth has enabled education training programs being run out of hospitals in Sydney to be transmitted to hospitals in Tamworth, Dubbo and Orange.[31]

HEALNet

2.24   The Health, Education and Learning Network, or HEALNet, provides online professional development for nurses and allied health professionals. Under the Federal Government's Digital Regions Initiative, TAFE North Coast Institute has received three years' funding to expand the HEALNet online learning program. The program originally had 30 topics, which is being expanded to over 150 topics to support a broader range of medical professionals.[32]

Ageing, Disability and Home Care

2.25   Ageing, Disability and Home Care (ADHC), within the Department of Human

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[28] DBCDE, *Chronic Disease Management for Regional and Rural Communities – Hunter New England*, viewed 10 November 2010, <http://www.dbcde.gov.au/funding_and_programs/digital_regionsl_initiative>

[29] Department of Health, Response to questions taken on notice at hearing, 4 June 2010, p. 3

[30] Ms Kathleen Meleady, Transcript of hearing, 23 April 2010, p. 13

[31] Dr Robert Herkes, Transcript of hearing, 23 April 2010, pp. 13-14

[32] Department of Health, Response to questions taken on notice at hearing, 4 June 2010, pp. 1-2

Services, is also currently investigating use of e-learning tools, such as embedded instructional videos for departmental staff and community-based carers. The department informed the committee that use of such technology would ensure that materials distributed by ADHC are able to be understood by an audience with varying levels of literacy competence across the ADHC workforce, including funded service providers and their clients.[33]

Benefits for patients and practitioners

Distance is no longer a barrier

2.26 One of the key benefits of telehealth is that distance between the patient and the medical specialist is no longer a barrier to appropriate and timely patient care. This is a great benefit for patients who would ordinarily need to travel large distances to obtain specialist treatment, but who may not be able to for cost and logistical reasons. For example, a patient may have a critical medical status meaning transportation is not a safe option for them, or a patient may be located in a correctional services medical facility. In both of these situations, with the use of telehealth facilities, the patient will still be able to access the care they require. Mr Colman O'Driscoll, Service Director of Mental Health within Justice Health, explained to the committee the benefits of such arrangements when medically treating patients located in prison hospitals:

> What telehealth does and where it is extremely useful is in providing more immediate contact with patients, so that you can assess patients without having to send them away all of the time.[34]

2.27 A further benefit is the ability of a doctor in a rural or remote location to discuss a patient's medical condition with a city or regional specialist. With the use of video conferencing and high-speed data connections, both practitioners are able to examine the patient, look at scans and other patient results simultaneously and collaborate on an appropriate treatment plan. Ms Jenny Bennett, Executive Officer for Central NSW Councils (CENTROC), explained to the committee that access to this improved information and telecommunications technology meant:

> [a medical practitioner] is able to check the latest medical information so when [they] talk to a specialist about a patient, [they are] well armed and understands. That is a really powerful thing for medical people in the bush. The better the broadband we have, the better the level of service we can provide.[35]

2.28 Medical staff and students in rural and regional areas also benefit from the use of telehealth facilities as it removes the need for long distance travel to undertake training and education. Dr Herkes told the committee an example of this where nurses in Tamworth, Dubbo and Orange were able to participate online in training that was being run at a training hospital in Sydney, instead of having to take several days off to travel to Sydney, pay for accommodation and arrange babysitting.[36]

Communication difficulties have been removed

2.29 For people with communication difficulties, a practitioner's ability for instance to

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[33] Submission 9, DHS – ADHC, p. 3

[34] Mr Colman O'Driscoll, Transcript of hearing, 19 April 2010, p. 32

[35] Ms Jenny Bennett, Transcript of hearing, 23 April 2010, p. 2

[36] Dr Robert Herkes, Transcript of hearing, 23 April 2010, pp. 13-14

consult electronic records to access a person's medical history, and see the patient first-hand using video conferencing facilities, means this is no longer a barrier to obtaining appropriate medical treatment, where ever the patient is located. Mr Peter Adams, Adjunct Researcher with the Centre for Research in Complex Systems at Charles Sturt University, told the committee:

> The medical system just about entirely relies on self reporting, and even articulate people have trouble self-reporting their own medical health. If I turn up to hospital unconscious now, they do not know anything about me.[37]

2.30   The Australian Communications Consumer Action Network informed the committee about the particular benefits that telehealth can bring to people who may have problems communicating due to physical or intellectual disability:

> People with communication impairments could greatly benefit from video communication. This may be through their speech or movements being seen by the other party to assist with comprehension…Such video facilities could help those who have problems articulating their symptoms to show these to a remote medical practitioner.[38]

2.31   Use of telehealth facilities also improves communication between medical practitioners. Electronic archiving of medical records, digital imaging, test results and other data improves the accuracy in communicating important patient information between each of the various health professionals involved in treating any one patient. As Dr Herkes commented to the committee:

> From a clinical point of view, clearly as investigators of patients and testing of patients and the capacity for new and novel investigations have developed – x-rays, MRIs, scans – as clinicians, we are faced with overwhelming amounts of data.[39]

2.32   With the use of telehealth facilities, medical practitioners are now able to access patient information electronically as and when they need it, where ever they may be located. They can review a range of different data from different health specialists and can easily share this information and consult with other colleagues to decide on appropriate treatment for their patients.

Health outcomes have been improved

2.33   With the introduction of telehealth facilities comes the benefit of an improvement in health outcomes, particularly for those people living in rural and regional areas of the state. For example, accessing appropriate medical treatment using telehealth brings opportunities to delay or even prevent entirely the need for hospitalisation.

2.34   This can mean a reduction in medical complications that may arise from a person's unmonitored or untreated chronic health problems. For example, the development of glaucoma or the need for limb amputations due to diabetic complications or a higher risk of heart attack or stroke from poorly managed chronic heart conditions.

2.35   The wider use of telehealth in rural and regional settings also ensures improved health outcomes for people in remote areas due to the opportunities for professional development and support that these technological advances bring. For example, a remotely located medical practitioner is now able to case conference with other

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[37] Mr Peter Adams, Transcript of hearing, 19 April 2010, p. 3

[38] Submission 7, ACCAN, pp. 13, 15

[39] Dr Robert Herkes, Transcript of hearing, 23 April 2010, p. 13

practitioners and specialists who may be working from larger regional, or inner city medical facilities. With the use of videoconferencing and exchange of electronic data via fast broadband connections, an exchange of knowledge and skills can occur. Dr Herkes explained to the committee that medical practitioners in rural areas are also able to share the skills they have developed from working in a different environment with their colleagues in metropolitan areas.[40]

2.36   These improved methods of communication can also provide an avenue for both formal and informal professional support networks, which is especially beneficial for professional medical staff located in remote work settings. Speaking on this issue to the committee, Dr Herkes stated:

> My view from my ivory tower is that doing that allows people who do not have colleagues to chew the fat with are probably doing exactly the right thing, but often as doctors we do need reassurance that we are doing the right thing. For me it is easy. I go into the next office and say, "Hey, Richard, come and have a look at this. What do you think?" My colleague at Orange does that by videoconferencing with us and discussing a case, and looking at the x-rays with him, looking at the biochemistry with him.[41]

2.37   The ability to stay connected with colleagues in the medical profession also contributes to the retention of rural and regional medical staff. Ms Meleady told the committee:

> I refer to the issue of retention of our rural and regional staff. It has been said many times by those clinicians that being able to get that support, not just on the phone but by sending an image or by talking through a particular patient profile, has been significant to them feeling supported when they provide their services.[42]

Education

Interactive learning across New South Wales

2.38   Instead of learning solely by observation or listening, interactive learning encourages students to take an active part in the learning process. With the introduction of a range of technologies, the advantages of interactive learning have extended to students and teachers located in rural and remote areas, including the use of video conferencing, electronic whiteboards and software that enables collaboration between students and teachers.

Equipment and infrastructure to connect schools

2.39   The Federal and New South Wales Governments have funded a range of initiatives to ensure new information and communication technologies are rolled out across the state. A number of programs are outlined below.

Connected Classrooms

2.40   The Connected Classrooms program received $158 million funding from the New South Wales Government to install ICT facilities in school classrooms that enable students and teachers to link and communicate with other schools in New South Wales and worldwide. The 'Interactive Classroom' equipment includes:

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[40] Dr Robert Herkes, Transcript of hearing, 23 April 2010, pp. 13-14

[41] Dr Robert Herkes, Transcript of hearing, 23 April 2010, p. 14

[42] Ms Kathleen Meleady, Transcript of hearing, 23 April 2010, p. 17

- interactive whiteboards
- videoconferencing facilities
- data collaboration and desktop sharing software
- online workspaces for students
- broadband bandwidth upgrades.

2.41   Mr Stephen Wilson, Chief Information Officer of the Department of Education and Training (DET), explained to the committee the sorts of technology being used by the Connected Classrooms program:

> That includes videoconferencing, interactive whiteboards in every school and desktop sharing software, so two schools can collaborate with each other on an interactive whiteboard. That means essentially they can have a video picture of the class, students or teacher and share data and activities via the interactive whiteboard.[43]

2.42   The New South Wales Government informed the committee that as at 3 February 2010, there were 1,404 'interactive classrooms' installed and a further 848 are to be installed by June 2011.[44]

National Secondary Schools Computer Fund

2.43   As part of the National Secondary Schools Computer Fund, the New South Wales Government negotiated a funding agreement with the Federal Government for $442 million to provide a laptop computer to all Year 9 to 12 students in the state by 2012.[45]

Digital Education Revolution – New South Wales Program

2.44   The New South Wales program of the Digital Education Revolution involves DET's wireless network being connected to a wireless network being built by IBM Australia for all New South Wales Government central and high schools. The New South Wales Government reported to the committee that the first phase of providing wireless access to all school libraries and up to twelve learning spaces on school campuses has been completed and the remainder of school learning spaces were to have received wireless installations by mid-2010.[46]

Tertiary education programs

2.45   In addition to these programs for secondary schools, the New South Wales Government reported to the committee that TAFE has installed interactive distance learning facilities in fifteen remote, mostly Aboriginal communities and plans to install these facilities in a further two communities.[47] This includes the installation of equipment such as satellite dishes, videoconferencing and computing facilities in a variety of off-campus locations including land council buildings, community facilities and primary schools. DET reported that since 2006, eighty-four Aboriginal people from small remote communities have enrolled to date in interactive distance learning courses.[48]

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[43] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 25

[44] Submission 5, New South Wales Government, p. 6

[45] Submission 5, New South Wales Government, p. 7

[46] Submission 5, New South Wales Government, p. 7

[47] Submission 5, New South Wales Government, p. 6

[48] DET, Response to questions taken on notice at hearing, 18 May 2010, p. 1

2.46   Richmond Valley Council reported to the committee recent plans for North Coast TAFE to improve their ICT facilities with a proposal for new automotive teaching facilities at their Kingscliff Campus:

> Together with Toyota Australia, North Coast TAFE has planned a facility that will incorporate wireless access in all workshop areas, access to web-based diagnostic tools, and video streaming of classes and demonstrations to Australian and international students.[49]

Benefits for students and teachers

Opportunities for a broader and richer education

2.47   With the spread of ICT facilities across the school sites and tertiary campuses of New South Wales, a broader and richer education has been made possible for all students, regardless of where in the state they are located. Having access to faster and more reliable broadband and wireless internet services has meant that students in rural and regional locations can access a wider variety of subjects. For example, under the state's Distance Education Access Program, Mr Wilson reported to the committee that 22 schools in 5 geographical clusters across rural and regional New South Wales are linked to offer a shared Year 11 and 12 curriculum of around 54 subjects to 353 full-time equivalent students.[50] Mr Wilson explained that the program offers choice of subjects to students which would otherwise be unavailable to students at remote schools.[51]

2.48   Under the Western New South Wales Region Virtual Selective High School, or 'XSEL', students are able to study selective maths, English and science without having to travel long distances to regional centres. Mr Wilson reported that thirty students have been selected from seventeen schools across western New South Wales to study under this program. Students dedicate half their day to taking selective classes via the internet and half in their local schools.[52] Mr Wilson explained:

> The way they do that is they have a laptop that is the same as the Digital Education Revolution laptop, and via their home school they will attend classes with centralised teachers in another location. They will use the wireless network that is within their school to connect to lessons that have been given to them and curriculum that is given to them by a teacher who is in a central location.[53]

2.49   Beyond the official school curriculum, students in rural and regional areas have the opportunity to learn from interactions via videoconferencing and internet facilities with experts and professionals who may be located elsewhere in the state or even overseas. Mr Wilson reported:

> We are seeing connections between rural and remote communities and outside agencies like the Marine Park Authority, conferences with overseas experts…This program is opening up the world to students within our education system.[54]

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[49] Submission 6, Richmond Valley Council, Attachment A, p. 2

[50] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 25

[51] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 25

[52] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 25

[53] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 25

[54] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 24

2.50   Exposure at school age to technological advancements also has the added benefit for students to obtain skills and experience that may later benefit them in gaining future employment. The New South Wales Government's submission noted that research conducted by the Commission for Children and Young People shows access to telecommunications allows children to develop the technological knowledge and skills required to help them succeed at school and later in the workplace.[55]

A more engaging and interactive learning experience

2.51   Having improved ICT in the classroom means that students are better able to interact and collaborate with their peers and other teachers. This is especially beneficial for students who are in rural and regional locations. Mr Wilson explained to the committee the benefit of interactive classroom facilities:

> The benefit of this is that two schools interacting with each other, or a teacher based in one location is actually interacting with a class at another location. She or he can say, "Go to the board and write these things down," or "Answer these questions," and you can see the result of it at both locations simultaneously.[56]

2.52   Further, Mr Wilson said that as a result of this interactive dimension to learning:

> Students are becoming much more engaged as a result of learning in the way they are used to interacting at home. They are using technology in new and innovative ways all the time. As the department rolls out its learning tools which are part of the Connected Classrooms program, we will get more interaction, collaboration and creation of content.[57]

2.53   Tertiary and adult education providers are also engaging their students using advanced technology to communicate and interact. Richmond Valley Council told the committee of one example where teaching staff at North Coast TAFE were interacting with students by making increased use of wikis, blogs, social networking spaces and wireless technologies.[58]

2.54   Additionally, the New South Wales Government submitted:

> Using interactive digital technologies has a positive impact on learning, increasing students' motivation and their level of independence, as well as encouraging individualised learning.[59]

Better fit with work and life demands

2.55   With the advent of technological developments, continuing education at a tertiary level or pursuing education as an adult student through community colleges are now opportunities that are open to people wherever they reside, whether in a metropolitan, regional or rural area. Having the flexibility of online education options brings the benefit of enabling more people who have other work and life commitments to continue their education. As noted by the Southern Cross University in the Richmond Valley Council submission:

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[55] Submission 5, New South Wales Government, p. 5

[56] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 25

[57] Mr Stephen Wilson, Transcript of hearing, 23 April 2010, p. 27

[58] Submission 6, Richmond Valley Council, Attachment A, p. 2

[59] Submission 5, New South Wales Government, p. 5

> The University is acknowledging that students need to be able to access flexible, relevant and engaging study options to meet their work and family responsibilities. The aim is to develop a new generation of flexible delivery.[60]

2.56 Byron Shire Council also stated in its submission that access to advanced ICT facilities provides the opportunity for adult education such as regional community college programs. Their submission noted:

> These opportunities are important as students can do the work in their own time, meaning study can be done in conjunction with other lifestyle responsibilities, for example, work, farming, or parental responsibilities.[61]

2.57 Many tertiary institutions now heavily rely on electronic forms of communication in order to cater for a geographically dispersed student base. Richmond Valley Council gave the example to the committee of Southern Cross University:

> All of the units taught at the university have an online presence, with extensive use of videoconferencing, web-conferencing, video, audio and other online tools to facilitate learning.[62]

Justice

e-Justice initiatives in New South Wales

2.58 Improved information and communications technology has also recently been applied by New South Wales Government justice agencies. Over the last few years a range of audio-visual services, electronic document management systems, and mobile communications devices have been integrated into the ways that legal information and advice is provided to the community, how court cases are prepared and conducted, and how offenders in custody are managed.

Audio-visual conferencing

2.59 The New South Wales Government reported to the committee that since 2001, the Department of Justice and Attorney General (DJAG) has been working with other agencies to establish a network of videoconferencing facilities in courts, correctional and detention centres, Police Force stations, and legal aid, prosecutors' and interpreters' offices.[63]

2.60 Where such equipment has not yet been installed, such as in some regional and rural court houses, mobile audio-visual equipment is made available.[64]

2.61 The committee also heard from Corrective Services about its Cross-Justice Video Conferencing System which commenced in 2002-2003:

> The system connects over twenty-five Corrections Services sites which include correctional centres, 24-hour court cell complexes, and corporate offices by audio-visual link to each other and to courts.[65]

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[60] Submission 6, Richmond Valley Council, Attachment A, p. 1

[61] Submission 10, Byron Shire Council, p. 6

[62] Submission 6, Richmond Valley Council, Attachment A, p. 1

[63] Submission 5, New South Wales Government, p. 8

[64] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 23

[65] Submission 8, Corrective Services, p. 1

2.62   This network of audio-visual conferencing equipment has been utilised in the courts process in several ways. In criminal matters, accused persons in custody are able to attend a court hearing remotely using the audio-visual links provided in the courtroom and in the corrections facility where the person is being held. As Mr Michael Talbot, Assistant Director General, Court and Tribunal Services of DJAG, explained to the committee:

> There are certain elements of a case that would be dealt with by default using video conferencing, so bail, committal matters or sentencing. The only reason why that would not happen is if there is not a facility there, or there is a persuasive [legal] argument against it.[66]

2.63   Secondly, a legal representative is able to meet with their client who is in custody using the same court room/corrections facility audio-visual link. Mr Talbot described this process:

> If you wanted to speak with your client and take instructions from them, there is a secure phone in the court that would take you directly to that client, which closes down the videoconferencing so you can have confidential discussions, and when you've completed those, again, you appear back before the court, and the matter is dealt with.[67]

2.64   Thirdly, these audio-visual facilities enable witnesses to give their evidence in court proceedings remotely. This is particularly important if the witness is a vulnerable person who due to their age, or the nature of the matter being prosecuted, would otherwise feel intimidated being physically present in the court room. Mr Talbot explained:

> We have suites which are either remote in the court house, or remote from the court house, and you would go into that, and you often need a support person as you are giving evidence. You would give your evidence and be cross-examined on your evidence sitting in that remote area. You would see the court and the judge and jury, if there was a jury, and your evidence would be recorded.[68]

2.65   Expert witnesses, including those from overseas, are also able to give their evidence in court via audio-visual link. With the recent introduction of videoconferencing facilities in police stations and legal aid offices, government officials who are called as witnesses in criminal cases can do so without having to attend court in person. Mr Talbot told the committee:

> The law was changed at the beginning of last year so that government witnesses, primarily the police, can give their evidence via video link from the police station to avoid the police officers being out of the system for the whole day when they are giving their evidence…especially if the matter does not go ahead as planned.[69]

2.66   The use of videoconferencing has also been introduced to civil proceedings. Mr Talbot described the process to the committee, where the lawyers:

> sit in their chambers and give evidence to a magistrate via a video link to deal with preliminary matters, or deal with matters to finality in front of a magistrate or whoever the appropriate judicial officer is.[70]

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[66] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 24

[67] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 22

[68] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 23

[69] Mr Michael Talbot, Transcript of hearing, 19 April 2010, pp. 24-25

[70] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 22

Electronic documents and information

2.67   In New South Wales, a computerised system known as JusticeLink is currently being developed and implemented to manage the large amounts of paperwork connected with court cases. For criminal cases, Mr Talbot explained:

> Our system of justice often initiates a matter in one jurisdiction, but it evolves to another jurisdiction. You could be charged and the matter heard in a [local] court, but depending on the severity of the offence, you could either be dealt with there, or the District or Supreme Court. So we are introducing an electronic case management system that deals with that information across all of those jurisdictions.[71]

2.68   For civil cases, such as for insurance claims some matters are dealt with by all parties involved in a civil case logging onto the secure Bulletin Board electronic communication system. Mr Talbot further explained:

> We have pilots going on in the District, Supreme and Local Courts where matters are dealt with, mostly to finality by legal practitioners arguing on civil matters. Once they are registered, they get email advice that a defence has been filed or a statement of claim has been updated, and then a judicial officer will deal with the matter. That has proved very successful and useful to the legal profession. You do not have to leave your chambers to come to the court.[72]

2.69   The document management system is designed so that litigants and their representatives can deal electronically with courts instead of having to attend in person for case management meetings and hearings. It also allows judges the ability to give directions to litigants via the internet and all parties, legal representatives and judicial officers to monitor the status of their proceedings, and track case histories in a secure online environment.[73]

2.70   DJAG is also developing new ways for key agencies in the criminal justice system to better communicate and interact with each other. For example, the Joined Up Justice Program links agencies such as Corrective Services, the Police Force and the Office of the Director of Public Prosecutions to reduce manual processing, improve data accuracy and enable frontline agencies to act on real-time information.[74]

2.71   DJAG has also developed online resources for the public such as the LawLink website to enable the community greater access to legal information and advice. Mr Talbot described who tends to use these online resources:

> Members of the community who are looking to resolve a legal issue that is going on in their lives might have been charged with some crime, but also a large number of people are seeking the protection of the courts to enforce their rights – either small business people, or families seeking protection from other members of the family that might be abusing them, and so on.[75]

2.72   Further, Mr Talbot explained the plans for future development of LawLink to create a more interactive website:

> This website will become increasingly interactive. A lot more people want to represent themselves, particularly on smaller matters, both on the civil side of the equation and

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[71] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 21

[72] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 22

[73] Submission 5, New South Wales Government, p. 8

[74] Submission 5, New South Wales Government, p. 8

[75] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 21

on the crime, if they have been charged with something. As we develop [these sites] to make them more interactive, you will be able to enter your details, and that will progressively inform you as to what the circumstances are and how you are going to deal with this matter, whether you want to plead guilty or file a defence.[76]

Benefits for the justice system

Reduced travel

2.73   With the advent of videoconferencing facilities, secure email and telephone systems installed in the courtroom, the need for travel by all parties involved in a court case has been greatly reduced. As Mr Talbot told the committee:

> Especially in rural and remote areas, it is very difficult getting prisoners and witnesses to attend. Video conferencing helps a great deal with that.[77]

2.74   The benefits for legal practitioners are also evident, as they are often required to travel to multiple correctional institutions which are located in remote areas to consult with their clients to prepare for a court hearing. With the use of video conferencing and a secure telephone line instead, legal representatives are able to consult with their clients directly in the courtroom. Mr Talbot explained the advantage of such arrangements for legal professionals:

> Very often legal practitioners find it difficult going to correctional institutions which are often at the periphery of places. This gives them access to their clients in a reasonably effective way, particularly for legally aided clients, who often have their lawyer assigned to them pretty close to when they have to appear in the court. So you and the magistrate are in the court, but your client would appear by the video conference.[78]

2.75   The committee also heard how the New South Wales Courts videoconferencing scheduling system works to link a number of different corrections facilities around the state:

> We schedule slots into the court for people to appear and they can appear from a number of different custodial places, including police cells. If you are the legal practitioner you might have somebody at Silverwater, somebody at the remand centre there, somebody at Parramatta, somebody at Parklea. You could appear before the magistrate and each of your clients would in turn appear via videoconferencing, because we have scheduled that ahead of time.[79]

2.76   The submission from Corrective Services noted that since the implementation of this system, over 133,000 matters have been dealt with using audio-visual links for hearings at the State Parole Authority, the Supreme, District and Local Courts without the inmate having to leave the correctional centre.[80] In the 2008-09 financial year, just over one third of all court matters dealt with by audio-visual link involved matters from regional areas of New South Wales.[81]

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[76] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 22

[77] Mr Michael Talbot, Transcript of hearing, 19 April 2010, pp. 24-25

[78] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 22

[79] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 23

[80] Submission 8, Corrective Services, p. 1

[81] Submission 8, Corrective Services, p. 1

2.77   For accused persons in custody, the reduced need to travel from the remand or correctional facility where they are being held to a local or district court is often welcomed. Mr Talbot explained:

> If you are a prisoner and you have to appear at court, it is not unusual for you to be taken out of your cell at 5 o'clock in the morning, miss breakfast, be on a truck to court, wait from around 10 o'clock on. You might appear at 5 o'clock in the afternoon and you might not get back to your cell until 9 o'clock at night…in terms of keeping everybody calm and less agitated and properly managed, it obviously contributes to that.[82]

2.78   DJAG informed the committee that it is also investigating the possibility of expanding the use of audio-visual facilities in courtrooms to enable public screenings of some Supreme Court matters online. This would then enable people to observe court proceedings from where ever they were located in the state, instead of having to travel long distances to attend court at a metropolitan location.[83]

Improved efficiencies

2.79   Efficiencies in court processes have been greatly improved since the introduction of video conferencing facilities. Mr Talbot explained:

> It has had a remarkable impact in that the court can process matters, particularly the ones that need just brief dealings, like bail applications. All are dealt with by video conferencing now. You can probably deal with 10 of those in the space of 30 minutes compared to just a small handful. Very often prisoners have to be taken down to the cells below the court, brought back up again, so you are waiting for all that process. Whereas [with video conferencing] a magistrate can deal with the clients one after another, a new one is appearing on the screen, they are dealing with the matter, and they are being dealt with quite quickly.[84]

2.80   Not having to bring prisoners to court also has benefits for correctional organisations Juvenile Justice, and Corrective Services. The committee was told:

> There is the risk of escape and occupational health and safety issues. A lot of the cells in the courts would need to be upgraded substantially. All of those sorts of costs and investments are avoided because of the technology.[85]

2.81   Court appearances where videoconferencing is used also create efficiencies by reducing costs across the justice sector. DJAG estimates the value of costs saved to date as $47.32 million. Videoconferencing reduces costs relating to:

- transportation of prisoners conducted by Corrective Services
- air charters to transport juvenile offenders from metropolitan centres to remote courts
- expert witness appearances in court
- travel, accommodation and hours for interpreters and Legal Aid employees to regional areas
- construction of additional holding cells.[86]

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[82] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 24

[83] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 24

[84] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 23

[85] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 24

[86] DJAG, Response to questions taken on notice at hearing, 17 June 2010, p. 1

Better access to justice

2.82   The ability to find legal advice and information online, such as with the LawLink website, has meant that people across the state can access information that can help them make informed choices about their personal situations, and ultimately get better access to justice. Mr Talbot explained to the committee:

> [T]here are a lot of complexities that the history of the law has built in over a period of time, so what we are doing now is taking new disciplines to reduce that complexity so that ordinary citizens and particularly vulnerable people can use this channel to get the type of help they need.[87]

Conclusion

2.83   The committee finds that the introduction of new technologies and greater access to telecommunications, such as videoconferencing and electronic records management, has significant potential to increase operational efficiencies and the quality of government service delivery in health, education and justice. This is particularly true for rural and regional communities.

2.84   However, the widespread use of such technological advancements requires high-speed broadband internet connections. While this report does not intend to comment on telecommunications infrastructure and availability issues in rural and regional areas, the committee stands by the recommendations in its previous reports aimed at improving access to telecommunications outside metropolitan areas.

2.85   The committee has been impressed with the current initiatives of the New South Wales Government, which have focussed on introducing ICT advancements, to assist rural and regional communities in areas such as health, education and justice. It is imperative that the progress achieved to date from the New South Wales Government 's investments in this area is continued.

2.86   Many of the projects the committee has heard about appear to be isolated or pilot projects. Some do not continue past the initial pilot stage, while others are not implemented more broadly across the state. In light of this, the committee considers that the development of a state-wide strategy or plan for the introduction of new technology, associated with greater access to telecommunications, within each portfolio would ensure that projects have long term support and are implemented more broadly throughout the state.

2.87   The committee acknowledges that each of the portfolios of health, education and justice have their own specialised technological requirements. Given these complexities and differences, a specific strategy or plan should be created for each portfolio.

2.88   Such strategies or plans should identify the gaps in service provision, particularly within rural and regional communities, where technology could assist. Each strategy or plan should also outline initiatives to fill these gaps, which may include both the expansion of existing programs and the identification of new programs.

2.89   To ensure its effectiveness, each strategy or plan should specify the necessary resources required to implement the strategies or plans, such as ongoing funding. Additionally, the potential barriers to the expansion or introduction of programs

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[87] Mr Michael Talbot, Transcript of hearing, 19 April 2010, p. 22

should be clearly identified and addressed. Each strategy or plan should also be accompanied by a detailed implementation schedule outlining the timeframe and locations for the introduction of ICT.

RECOMMENDATION 1: The Minister for Health, Attorney General and Minister for Education and Training develop state-wide strategies or plans for the introduction of new technology, associated with greater access to telecommunications, for each of their portfolios. These strategies or plans should outline gaps in service provision, initiatives to address these gaps, resource requirements, solutions to potential barriers and a detailed implementation schedule.

2.90   The committee notes that this inquiry has focussed on the areas of health, education and justice. There are, however, other portfolios where the introduction of new technology, associated with greater telecommunications access, could assist rural and regional communities. To ensure that non-metropolitan areas gain improvements in the delivery of all government services, further strategies or plans, as discussed above, should be developed for all relevant portfolios.

RECOMMENDATION 2: The New South Wales Government develops state-wide strategies or plans for portfolios where the delivery of new technology, associated with greater access to telecommunications, will greatly assist rural and regional communities.

2.91   The committee has noted in its previous reports that often rural and regional communities do not have the same level of access to government services as metropolitan communities. To address this disparity rural and regional areas should be given priority in any implementation of new technology associated with greater access to telecommunications.

RECOMMENDATION 3: The New South Wales Government prioritises rural and regional areas in the implementation of new technological advancements associated with greater access to telecommunications.

2.92   The committee notes that the introduction of new technology, associated with greater access to telecommunications, within departments will be of little value if staff are not able or willing to use it. As this technology becomes embedded into standard operations, it is essential that sufficient and appropriate training and support is provided to staff. Such training will ensure that the potential of the new technology will be realised.

RECOMMENDATION 4: The New South Wales Government ensures that all staff have access to appropriate training and support so they are well equipped to use new technology associated with greater access to telecommunications.

Chapter Three - Business and social benefits

3.1 The way that information and communications technology (ICT) has been integrated into business and commercial activity in New South Wales has resulted in better connectivity between businesses and their clients and between professional colleagues. It has also allowed transformations in business operations and new opportunities for commercial growth.

3.2 International studies on the impacts of access to improved broadband across developed nations have shown a clear and strong connection between telecommunication investments and economic growth. One study showed that between 1980 and 2006, a 10% increase in broadband coverage within a high-income country added 1.3% to that country's gross domestic product (GDP) and 1.21% GDP was added in low to middle-income nations.[88]

3.3 Benefits such as these will be most evident in rural and regional communities where small and medium enterprises (SMEs) and agribusinesses can harness available technologies to become truly competitive and sustainable into the future.

Benefits for rural and regional small and medium enterprises

3.4 The most prevalent type of business in rural and regional areas of the state is the SME. Mr Peter Adams, Adjunct Researcher at the Centre for Research in Complex Systems at Charles Sturt University, reported that across Australia SMEs provide 50% of private sector employment, with 68% of these either run out of or based from homes.[89] Mr Michael Cullen, Executive Director of Enterprise, Small Business and Regional Development within the Department of Industry and Investment, told the committee that there are approximately 650,000 small businesses across New South Wales.[90]

3.5 SMEs, especially those which are rurally and regionally based, are well placed to take advantage of new business opportunities that developments in ICT bring. This is not only by expanding existing business operations, but also by devising innovative and creative applications of newly available technology. As Mr Adams explained:

> It is always the smaller players who can figure out how to make money out of a diverse market, because a company the size of Optus or Telstra or any of those other big players just have too many overheads and they cannot change and adapt.[91]

Being well connected

3.6 Providing rural and regional SMEs with access to new and improved ICT facilitates the creation of broader professional networks and promotes better relationships between professionals, colleagues and consumers. For example, a submission from Satyananda Yoga Academy, a small business located 55 kilometres south of

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[88] D M West, "An international look at high-speed broadband" Governance Studies, Brookings Institute, February 2010, viewed 31 August 2010, <http://www.brookings.edu/reports/2010/0223_broadband_west.aspx>, p. 2

[89] Submission 10, Byron Shire Council, p. 8

[90] Mr Michael Cullen, Transcript of hearing, 19 April 2010, p. 15

[91] Mr Peter Adams, Transcript of hearing, 19 April 2010, p. 6

Sydney, commented that fast and reliable telecommunications would help them to improve their relationships with other professionals and allow them to participate in sharing best practice and knowledge with their peers:

> Satyananda Yoga Academy Ltd has the potential to be actively engaged in a worldwide public network of yoga specialists and health workers, and would contribute to a developing body of knowledge using the internet.[92]

3.7 Access to ICT can also help lessen the isolation that some businesses and professionals may encounter whilst working in rural and regional areas. Dr Robert Herkes, Intensive Care Unit Consultant at the Royal Prince Alfred Hospital and Co-chair Intensive Care Taskforce, Royal Prince Alfred Hospital, described how new technologies can provide rural and regional medical practitioners with a more collegiate and supportive environment:

> That, hopefully, will mean that in 10 years time [my colleague] is still in Orange and has not felt the isolation of isolated practice and given up. It is really important from that point of view.[93]

Transforming business operations

3.8 The potential of reliable, advanced and well integrated ICT to transform business operations, for instance in the agricultural industry, was also raised by inquiry participants.[94] In their submission, the New South Wales Government listed a number of possibilities that integrated ICT can offer to primary producers:

- accessing up to date weather information and other satellite images to assist in the management of the farm

- sourcing potential customers, such as breeders, by transmitting photographs and genetic details of stock

- using Global Positioning System and Geographical Information Systems to map soil types, weeds, fertiliser applications, and other agronomic information vital for improving crop yield and pasture productivity

- accessing up to date commodity information from across the globe to enhance marketing opportunities of grain

- accessing up to date information about agricultural production systems and conservation farming techniques that re more adaptable to changing climate, weed and pest management advice, specific livestock advice and licensing information, and drought assistance

- enhancing the capacity for the delivery of bioinformatics and other high technology information-rich delivery services

- the effective and efficient interaction of government agencies, livestock health and pest authorities and local government during major emergency responses

- communicating with other parts of the value chain (including markets).[95]

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[92] Submission 3, Satyananda Yoga Academy Ltd, p. 2

[93] Dr Robert Herkes, Transcript of hearing, 23 April 2009, p. 14

[94] Submission 1, Innovative Synergies; Submission 5, New South Wales Government; Submission 10, Byron Shire Council

[95] Submission 5, New South Wales Government, pp. 10-11

Growing existing business

3.9   For businesses who are home based, a rapidly growing part of commercial activity depends on the internet and a web presence to be able to exist and grow. Mr Cullen reported to the committee that for the small businesses his department has interacted with, the main point of interest is finding ways to use new technology to build markets, especially in terms of establishing a web presence.[96]

3.10   Byron Shire Council noted in its submission that high-speed broadband offered significant opportunities for growth in the region and could yield a range of benefits for local businesses and communities. The council particularly sees home-based businesses as a major growth sector to be encouraged in their region.[97]

3.11   The Small Business and Regional Development Unit within the Department of Industry and Investment, report that growing business by using the internet and other telecommunications advances is a priority for many. In evidence before the committee, Mr Cullen commented:

> When it comes down to it, when we deal with small business, what they are all after is building their markets, being able to grow their businesses. If they are not using the internet as a tool, if they do not have a web site that they can use as a point of presence, then eventually their business is likely to go backwards.[98]

3.12   In addition, reliable and efficient ICT can assist SMEs to grow their business by connecting to a wider market. Byron Shire Council stated in their submission to the committee:

> Online sales are a growth area where local products or services are able to be provided online, therefore enabling suppliers to market to the world. For example, food produce, fashion, technology, consulting, and design services.[99]

Attracting new business

3.13   The rollout of high-speed broadband to rural and regional areas that have traditionally experienced slow, expensive or unreliable telecommunications services will help to not only enhance local business capabilities and opportunities, but also attract further business and investment to these areas.

3.14   In his submission, the Federal Member for Parkes, Mr Mark Coulton MP, suggested that such improved telecommunications service delivery could prove to be the catalyst for new business opportunities, which would lead to new jobs growth in his electorate and other regional areas.[100]

3.15   Richmond Valley Council submitted to the committee that a growing number of businesses were relocating to their region who were heavily reliant on ICT facilities, particularly in the creative industry sector. The prospect of further improvements to telecommunications in their region means a real opportunity to attract more business of this kind, and with this comes the opportunity to stimulate employment, economic growth and vibrant communities:

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[96] Mr Michael Cullen, Transcript of hearing, 19 April 2010, p. 16

[97] Submission 10, Byron Shire Council, p. 8

[98] Mr Michael Cullen, Transcript of hearing, 19 April 2010, p. 16

[99] Submission 10, Byron Shire Council, p. 8

[100] Submission 4, Mr Mark Coulton MP, p. 2

> The NBN will allow the immediate application of new modes of operation such as collaborative post production, rapid image file transfer, online real-time collaborative editing, and a host of opportunities for new business models.[101]

Improving efficiency, productivity, competition and viability

3.16   Incorporating e-commerce into the way that SMEs do business has brought efficiencies and increased productivity especially for businesses and commercial activity in rural and regional New South Wales. With the use of web-based marketing and commercial transactions, and business support software for finance and workflow management, SMEs are becoming more competitive and sustainable longer term. The New South Wales Government submission stated:

> Broadband can play a critical role in reducing business costs and improving efficiency and productivity, which in turn underpins longer-term viability and ongoing job generation.[102]

3.17   A 2003 survey of rural non-farm businesses found that the majority were motivated to embrace new technologies in order to gain a competitive advantage in the marketplace. They also sought to capitalise on new business opportunities, for example where rural businesses sold specialist or niche products.[103]

3.18   This opportunity for rural and regional businesses to remain competitive in an increasingly global economy continues to be a motivating force today. As Mr Garry Styles, General Manager of Orange City Council, explained to the committee:

> If you look at the United Kingdom and Singapore and places like that, they have very larger rollout programs. It is not happening now, but they are talking about speeds up to 1,000 in the longer term. If we are going to be part of this sort of global set-up, our people need to be competitive.[104]

3.19   The efforts of SMEs to improve their business and commercial operations will have a flow on effect, bringing benefits not only to individual businesses, but also to the wider community, as Mr Coulton submitted:

> Schools, health care services and small businesses could all work to deliver their services more effectively and efficiently with broadband. Existing businesses could create better opportunities and be able to be competitive with their city counterparts, and there would be a greater ability to attract new businesses resulting in new jobs and growth to areas.[105]

3.20   One example of this was submitted to the committee by Richmond Valley Council, who provided information about a local business, Pandanas Media. In the production of a documentary for Australian television, the efficiencies Pandanas were able to achieve with the use of ICT saved production costs and enabled them to create employment for people in rural and regional locations.[106]

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[101]   Submission 6, Richmond Valley Council, Attachment A, p. 3

[102]   Submission 5, New South Wales Government, p. 10

[103]   R Stayner, & J McNeil, *Changing Business Realities? The implications of e-commerce technologies for rural non-farm businesses*, Institute for Rural Futures, University of New England, April 2003, p. 35

[104]   Mr Garry Styles, Transcript of hearing, 23 April 2010, p. 3

[105]   Submission 4, Mr Mark Coulton MP, p. 2

[106]   Submission 6, Richmond Valley Council, Attachment A, p. 4

Benefits for social life in rural and regional communities

3.21 While some potential benefits of improved ICT on socio-economic outcomes in rural and regional communities may be easily modelled and quantified, other benefits are more difficult to measure. There is an abundance of research and evidence to suggest that when high-speed broadband can be made widely available and affordable, it can significantly boost economic development, social connections and civic engagement.[107]

3.22 In its submission to the committee, the New South Wales Government recognised that the benefits of high-speed broadband go beyond improved service delivery:

> In particular, it provides a basis for the integration of rural and regional communities into economic, cultural and social life. People are able to communicate more effectively, form social networks across distances, and engage more fully through diverse forms of social interaction. These social inclusion benefits are likely to flow through to economic development outcomes, as individuals and businesses in these communities have access to improved opportunities for personal and business capacity building.[108]

3.23 A fast, reliable and affordable broadband service to residents of traditionally disconnected areas of New South Wales means people can complete more tasks online such those offered by the Government Licensing Service website. This would then reduce the need to travel long distances and disrupt family and work commitments.

3.24 High-speed broadband also has the potential to allow those who are isolated to engage in more democratic forums, stay more in touch with current affairs through their choice of news service and connect with others, whether in their local communities, from across Australia or around the world. Byron Shire Council gave some examples of how ICT could change the way people interact with each other in their submission:

> Community groups could be virtual, leading to improved connectivity and participation. Information-sharing and communication could happen online via chat or blogs, rather than the requirement for face-to-face meetings. Many groups could benefit from enhanced connection and technology/skills transfer. For example, landcare and other farming and environmental groups, parent groups, disabled, youth, and older persons' groups. Recreational opportunities could include book clubs and other social connections, which could be facilitated online and provide interaction with external contacts.[109]

3.25 This trend in access to ICT changing the way people interact was also noted by Mr Peter Hitchiner, Principal of Insight Telecommunications Consulting:

> There is a growing desire to be connected, to be able to contact people and/or leave messages, which will receive prompt response wherever the people are in the world. Social networking and presence services are also experiencing substantial demand. Teleworking on a part-time basis is becoming commonplace, assisted by the availability of improved broadband services.[110]

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[107] D M West, *An international look at high-speed broadband,* Brookings Institution, Washington D.C., February 2010, p. 2

[108] Submission 5, New South Wales Government, p. 3

[109] Submission 10, Byron Shire Council, p. 7

[110] Submission 2, Insight Telecommunications Consulting, p. 3

3.26 Furthermore, a higher level of connectivity breaks down geographical barriers that have traditionally restricted workers in certain information-based industries from moving away from business hubs in metropolitan areas. Over time, this could result in a more balanced geographical spread of the population across the state. The flow-on effects of this change would be considerable. Aside from easing pressures on health, education, transport and other government infrastructure in areas of high population density, increased numbers of people living and working in more rural and remote areas could revitalise the socio-economic outcomes of these communities.

3.27 Ultimately, the improvement of ICT in rural and regional areas of New South Wales will mean an equality of access to resources, and an ability to participate in business and social developments within the state and worldwide. As Mr Adams explained to the committee:

> We cannot put an international airport, a rail head, gas fired plants in every regional and rural town, but we can put fibre based broadband in every regional and rural town so that there is equality of access whether I am sitting here, or whether I am sitting in Port Stephens, or whether I am sitting in Wagga or anywhere else. Once we do that, we are not limited by geography or time anywhere in the state. The reality [will be] that people who live in the city will have the same benefits as those people who are living in Walgett.[111]

Conclusion

3.28 The committee finds there are significant opportunities for SMEs in rural and regional areas to expand and grow their business as a result of new technologies associated with greater access to telecommunications.

3.29 The committee notes that the New South Wales Government is already providing support to SMEs across New South Wales through such mechanisms as Small Business Week and the Small Business NSW website run by the Department of Industry and Investment's Small Business and Regional Development Unit.

3.30 Within New South Wales, there is further scope to generate broader awareness and understanding of the benefits and possibilities of ICT within rural and regional SMEs. Specifically, the unique needs and challenges of rural and regional SMEs should be addressed through appropriate information, education and training.

RECOMMENDATION 5: The Minister for Small Business provides specific information, education and training to support rural and regional small and medium enterprises, so they can benefit from technological advances associated with greater access to telecommunications.

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[111] Mr Peter Adams, Transcript of hearing, 19 April 2010, p. 5

Appendix One - List of submissions

1   Innovative Synergies

2   Insight Telecommunications Consulting

3   Satyananda Yoga Academy

4   Mr Mark Coulton MP, Member for Parkes

5   New South Wales Government

6   Richmond Valley Council

7   Australian Communications Consumer Action Network

8   Corrective Services

9   Ageing, Disability and Home Care, Department of Human Services

10   Byron Shire Council

Appendix Two - List of witnesses

Monday, 19 April 2010 – Parliament House

Witness	*Organisation*
Mr Peter Adams Adjunct Researcher	Centre for Research in Complex Systems, Charles Sturt University
Mr David Anthony Communications Planning and Development	Regional Development Australia – Southern Inland
Mr Michael Cullen Executive Director, Enterprise, Small Business and Regional Development	Department of Industry and Investment
Mr Michael Talbot Assistant Director General, Court and Tribunal Services	Department of Justice and Attorney General
Mr Wayne Ruckley Executive Director, Information and Communications Technology	Corrective Services
Mr Colman O'Driscoll Service Director, Mental Health Ms Susan Harman Chief Information Officer	Justice Health

Friday, 23 April 2010 – Parliament House

Witness	*Organisation*
Mr Garry Styles General Manager	Orange City Council
Ms Jenny Bennett Executive Officer	Central NSW Councils
Mr Peter Hitchiner Principal	Insight Telecommunications

Ms Kathy Meleady Director, Statewide Services Development	Department of Health
Mr Craig Smith Acting Chief Information Officer	
Dr Robert Herkes Intensive Care Unit Consultant, Royal Prince Alfred Hospital and Co-Chair, Intensive Care Taskforce	
Mr John Newcombe Director, Education Planning and Private Forestry, Primary Industries Business Group	Department of Industry and Investment (via teleconference)
Ms Fran Schonberg Manager, Office of Rural Affairs	
Mr Stephen Wilson Chief Information Officer	Department of Education and Training

Appendix Three - Visits of inspection

CSIRO ICT Centre

On 17 May 2010, a delegation of the committee visited the CSIRO Information and Communication Technologies (ICT) Centre in Marsfield, Sydney to hear about some of the research being undertaken in broadband technologies. The committee was represented by the Chair, Ms Sonia Hornery MP and three secretariat staff, Dr Carolyn Littlefair (Committee Manager), Dr Samantha Sharpe (Senior Committee Officer) and Mr Jon Frazer (Assistant Committee Officer).

The delegation met with Mr Ian Oppermann (Director, ICT Centre), Dr Iain Collings (Research Director, Wireless and Networking Technologies Laboratory), Professor Jay Guo (Theme Leader, Broadband for Australia) and Mr Gary Doherty (Director, Business Development).

Mr Oppermann told the delegation about some of the e-Health initiatives that CSIRO researchers had been undertaking, including the Virtual Critical Care Units project in New South Wales and a new initiative being run in conjunction with the Queensland Government. The delegation heard that the National Broadband Network (NBN) has the potential to close healthcare gaps between rural and regional communities and metropolitan areas.

Professor Guo and Dr Collings explained some of the research being undertaken and new technologies being developed by the Wireless Technology Laboratory. They also spoke with the delegation about new technologies they are developing that will improve fixed wireless broadband which many rural and regional communities will rely on when the NBN is rolled out.

Mr Doherty then explained the ICT Centre's role in the current rollout of the NBN in Tasmania. He explained the research on the implementation of new technologies they are undertaking as part of the NBN rollout.

The delegation was then escorted on an inspection of the ICT Centre to see first-hand the new technologies that have been developed already as well as a number of emerging technologies being developed.

Downing Centre court complex and Sydney Central Local Court

On 18 October 2010, a delegation of the committee visited the Downing Centre court complex and Sydney Central Local Court to learn about the benefits that developments in telecommunications and broadband are bringing to the justice system in New South Wales. Three committee members (Ms Sonia Hornery MP (Chair), Mr Geoff Provest MP, and Mr Peter Besseling MP), and Secretariat staff (Dr Carolyn Littlefair (Committee Manager), Ms Rachael Fraher, and Mr Jon Frazer) visited the Downing Centre court complex.

Downing Centre court complex

On 18 October, the delegation met Mr Michael Talbot (Assistant Director General, Courts and Tribunal Services) and Michele Goff (Senior Project Officer, Court Performance and Support) from the New South Wales Department of Justice & Attorney General.

Mr Talbot and Ms Goff provided an overview of how telecommunications and broadband services are integrated into the process of conducting court hearings of criminal cases. Mr Talbot described how audio-visual facilities are now regularly used at the Downing Centre and Sydney Central Local Court to link accused persons with courts for brief matters, such as pre-trial, bail, and sentencing hearings, instead of the accused having to appear in person.

The delegation heard about the otherwise elaborate and time consuming process of transporting people in custody from the corrections facility where they are being held, to the local court where their matter is to be heard.

Mr Talbot also described how audio-visual conferencing facilities are used in court hearings so that certain witnesses can give their evidence in proceedings without having to attend court in person, for example police officers, international or interstate witnesses, vulnerable witnesses, and child witnesses.

Mr Talbot explained the recent changes to legislation in New South Wales which make appearances in court via audio-visual link the default arrangement.

Sydney Central Local Court

The delegation then visited the nearby Central Local Court and Mr Talbot showed the delegation the technological equipment that is typically installed in local courtrooms to allow an accused person to appear before a magistrate via audio-visual link. The delegation observed several bail hearings before Magistrate Antony Townsden, where the accused persons were appearing via audio-visual link from a remote remand facility.

The delegation then met Magistrate Townsden, Alanna Kill (Deputy Registrar of Central Local Court), and Sergeant David Ghazeleh (Sherriff's Office).

Magistrate Townsden described how audio-visual linking of accused persons has improved the efficiency and timeliness of court proceedings since the introduction of these facilities. Sergeant David Ghazeleh described to the delegation some of the benefits of having persons in custody appear via audio-visual link, as well as the disadvantages and risks to corrections staff, court security personnel and persons in custody themselves when they are transported to court to appear in person.

Appendix Four - Extracts of minutes

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 8)
9.00 am, Thursday 12 November 2009
Room 1254, Parliament House

Members Present
Mr Gibson MP (Chair)
Mr Besseling MP   Mr Martin MP
Mr Provest MP

Apologies
Apologies were received from Mr Constance, Mr Harris and Mr Stewart.

Minutes
Resolved, on the motion of Mr Provest, seconded by Mr Besseling
That the minutes of the meeting on 29 October 2009 be confirmed.

Attendance at upcoming relevant conferences
The committee discussed attendance at:
a) the Communications Policy and Research Forum
b) the Telecommunications Regulatory Reform Forum and National Broadband Network Summit
c) Realising Our Broadband Future.

Resolved, on the motion of Mr Besseling, seconded by Mr Martin:
That as many members as wanted to could attend one of the conferences.

Future hearing date
The committee agreed to hold a hearing on 30 November to learn about progress of the National Broadband Network and other government programs.

Inquiry topic for 2010
The committee discussed the inquiry proposed in the discussion paper circulated and proposed in addition to investigate the availability of telecommunications services in rural and regional services.

Resolved, on the motion of Mr Provest, seconded by Mr Martin:
That the committee conduct an inquiry into the benefits and opportunities for rural and regional communities of having access to telecommunications (including broadband) and other technology services with a particular focus on:
a) improving government services and efficiency in service delivery, including in the areas of education, health and justice services
b) improving the level of engagement of rural and regional communities in public life through new technologies
c) investigating the potential economic benefits from new technology on commercial and business opportunities in rural and regional communities.

Recent developments in telecommunications
The committee noted the summary of recent developments in telecommunications policy and programs.

The committee adjourned at 9.20 am until 10.45 am Monday 30 November 2009.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 9)
10.45 am, Monday 30 November 2009
Room 814/815, Parliament House

Members present
Mr Gibson MP (Chair)
Mr Besseling MP   Mr Constance MP
Mr Martin MP   Mr Provest MP

Apologies
Apologies were received from Mr Harris and Mr Stewart.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Besseling:
That the minutes of the meeting on 12 November 2009 be confirmed.

Communications Policy and Research Forum
The committee noted that two members of the secretariat had attended the first day of the annual Communications Policy and Research Forum on 19 November and that the papers were now available.

Proposed meeting dates for 2010
The committee agreed to hold meetings in 2010 on the following Thursdays at 9:00 am:
25 February;
18 March;
22 April;
20 May;
3 June;
9 September;
28 October; and
25 November.

The committee adjourned at 2.18 am until 9.00 am Thursday 25 February 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 1)
9.00 am, Thursday 25 February 2010

Appendix Four

Room 1254, Parliament House

Members present
Mr Gibson MP (Chair)
Mr Constance MP   Mr Harris MP
Mr Martin MP   Mr Provest MP
Mr Stewart MP

Apologies
Apologies were received from Mr Besseling.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the minutes of the meeting on 30 November 2009 be confirmed.

Submissions
Resolved on the motion of Mr Provest, seconded by Mr Martin:
That submissions for the benefits of broadband inquiry numbered 1 and 2 on the circulated list be accepted and published on the committee's website.

Deliberation
Mr Martin requested that the secretariat provide information about the Community Broadband Development Fund to the certain submission writers for their information.

Future hearing dates
The Chair asked the secretariat to provide possible hearings dates at the next deliberative meeting for the committee to agree upon.

Possible visits of inspection
The Chair asked the committee to decide on possible visit of inspection locations for the next deliberative meeting.

Attendance at upcoming relevant conference
The committee discussed attending the Cebit National Broadband Network and e-health Conference 24-26 May 2010 and agreed that interested members would advise the secretariat.

The committee adjourned at 9.13 am until 9.00 am on Thursday 18 March 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 2)
9.00 am, Thursday 11 March 2010
Room 1254, Parliament House

Members Present
Mr Martin MP (Deputy Chair)
Mr Besseling MP   Mr Harris MP

Ms Hornery MP   Mr Provest MP

Apologies
Apologies were received from Mr Constance and Mr Stewart.

Acting chair
In the absence of a Committee Chair, the Deputy Chair took charge of the meeting.

Change in committee membership
The Deputy Chair reported that on 25 February 2010 Mr Gibson was discharged from the committee and Ms Hornery had been appointed to serve in his place. The Deputy Chair welcomed Ms Hornery to the committee.

Election of Chair
There being a vacancy in the position of Chair, the Deputy Chair called for nominations for a new Chair. Ms Hornery was nominated.

Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That Ms Hornery be elected Chair of the committee.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the minutes of the meeting on 25 February 2010 be confirmed.

Inquiry into the benefits of broadband
Resolved, on the motion of Mr Provest, seconded by Mr Martin:
That the committee accepts submissions 3 to 5 on the circulated list and publishes them on the committee's website.

Correspondence
The committee noted the answers to questions on notice given to Telstra at the public hearing 30 November 2009.

Deliberation
Mr Martin requested that the secretariat write to the Minister for Health to request detailed information regarding telehealth programs in New South Wales.

Resolved on the motion of Mr Martin, seconded by Mr Besseling:
That the Committee Chair write to the Minister for Health seeking further information on New South Wales telehealth programs.

Future hearing dates
The Chair asked the secretariat to provide possible hearings dates at the next deliberative meeting for the committee to consider.

Possible visits of inspection
The Chair asked the committee to nominate possible visit of inspection locations and dates for the next deliberative meeting.

Attendance at upcoming relevant conference

The committee discussed attending the Cebit National Broadband Network and e-health Conference 24-26 May 2010 and agreed that interested members would advise the secretariat.

The committee adjourned at 9.26 am until 9.00 am on Thursday 18 March 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 3)
9.00 am, Thursday 18 March 2010
Room 1254, Parliament House

Members present

Ms Hornery MP (Chair)
Mr Harris MP   Mr Martin MP
Mr Provest MP

Apologies

Apologies were received from Mr Besseling, Mr Constance and Mr Stewart.

Minutes

Resolved, on the motion of Mr Harris, seconded by Mr Martin:
That the minutes of the meeting on 11 March 2010 be confirmed.

Inquiry into the benefits of broadband

Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the committee accepts submissions 6 and 7 on the circulated list and publishes them on the committee's website.

Correspondence

The committee noted the Chair's letters to the Federal Minister for Broadband, Communications and the Digital Economy and to the Minister for Health.

Future hearing dates

The committee agreed to hold hearings on 19 and 23 April to hear evidence regarding telecommunications availability in rural and regional communities.

Possible visits of inspection

The committee agreed that it would conduct a visit of inspection of the CSIRO's Information and Communication Technologies Centre on 19 April 2010 and to try to visit Tasmania to discuss the roll-out of the National Broadband Network of 4 and 5 May 2010.

Attendance at upcoming relevant conference

The committee discussed attending the Cebit National Broadband Network and e-health Conference 24-26 May 2010 and agreed that interested members would advise the secretariat.

The committee discussed attending the Presiding Officers' Scientific Briefing – 27 October "Impact of New and Evolving Technologies on Health Delivery" Professor Phillip Davies, Health Systems and Policy, University of Queensland.

The committee adjourned at 9.20 am until 10.00 am on Monday 19 April 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 4)
9:45 am, Monday 19 April 2010
Room 814/815, Parliament House

Members present
Ms Hornery MP (Chair)
Mr Besseling MP   Mr Constance MP
Mr Harris MP   Mr Martin MP
Mr Provest MP   Mr Stewart MP

Minutes
Resolved, on the motion of Mr Harris, seconded by Mr Martin:
That the minutes of the meeting on 18 March 2010 be confirmed.

Inquiry into the Benefits of Broadband
Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the committee accepts submissions 8 to 10 on the circulated list and publishes them on the committee's website.

Recent Developments in Telecommunications policies and programs
The committee noted the summary of recent developments in telecommunications policy and programs.

Visit of inspection
The committee discussed the upcoming visit of inspection to the CSIRO ICT Centre on 17 May 2010 and agreed that the secretariat would confirm arrangements by email.

Attendance at upcoming relevant conference
The committee discussed attending the Cebit National Broadband Network and e-health Conference 24-26 May 2010 and agreed that as no members were available, a member of the secretariat should attend if possible and advise the committee of relevant matters.

Public Hearing
The Chair opened the public hearing.

Mr Peter Adams, Adjunct Researcher, Charles Sturt University was sworn and examined. In support of his evidence Mr Adams tabled slides to assist his presentation and a document entitled "User-centred broadband: the Kenniswijk Experiment" by Trevor Barr. Evidence completed, the witness withdrew.

Mr David Anthony, Communications Planning and Development, Regional Development Australia Southern Inland, was affirmed and examined.
Evidence completed, the witness withdrew.

Mr Michael Cullen, Executive Director, Enterprise, Small Business and Regional Development of the Department of Industry and Investment was sworn and examined.
Evidence completed, the witness withdrew.

At 11.00 the Committee adjourned for a break and resumed at 11:15 am.

Mr Michael Talbot, Assistant Director General, Court and Tribunal Services, Department of Justice and Attorney General was sworn and examined.
Mr Talbot undertook to provide further information to the committee in relation to the location of courthouses with videoconferencing facilities and the estimated savings from the use of new technologies.
Evidence completed, the witness withdrew.

At 12:05 the committee adjourned for lunch and resumed at 1:00 pm.

Mr Wayne Ruckley, Executive Director Information Communication and Technology, Department of Justice and Attorney General – NSW Correctives Services was affirmed and examined.
Evidence completed, the witness withdrew.

Ms Susan Harman, Chief Information Officer, Justice Health was affirmed and examined. Mr Colman O'Driscoll, Service Director, Mental Health, Justice Health was sworn and examined.
Evidence completed, the witnesses withdrew.

Hearing on 19 April 2010
Resolved, on the motion of Mr Martin, seconded by Mr Besseling:
That members agree to publish the transcript once witnesses have had the opportunity to correct it.

Article
Mr Martin tabled an article entitled "Court Chaos" from the *Wentworth Advocate* of 17 April 2010 for the members' information.

The committee adjourned at 1.55 pm until 9.00 am on Friday 23 April 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 5)
9.35 am, Friday 23 April 2010
Room 814/815, Parliament House

Members present
Ms Hornery MP (Chair)

Mr Harris MP   Mr Martin MP
Mr Provest MP

Apologies
Apologies were received from Mr Besseling, Mr Constance and Mr Stewart.

Acting Chair
In the absence of the Chair, the Deputy Chair opened the meeting.

Minutes
Mr Martin requested the draft minutes of the meeting on 19 April 2010 be amended to refer to the *Wentworth Advocate* rather than the *Wellington Advertiser.*

Resolved, on the motion of Mr Harris, seconded by Mr Provest:
That the minutes of the meeting on 19 April 2010 as amended be confirmed.

Transcript of hearing of 19 April 2010
Members agreed to review their contributions to the draft Hansard transcript of the hearing on 19 April 2010 and advise the secretariat of any changes.

Arrival of Chair
Ms Hornery arrived at 9.38 am and took charge of the meeting.

Papers tabled at hearing of 19 April
Members noted:
a) Colour copies of the presentation tabled by Mr Peter Adams
b) Newspaper article circulated by Mr Martin.

Public hearing
The Chair opened the public hearing.

Mr Garry Styles, General Manager of Orange City Council was sworn and examined. Ms Jenny Bennett, Executive Officer of Central NSW Councils (CENTROC) was affirmed and examined.

In support of her evidence Ms Bennett tabled a document entitled "Why early roll out of the National Broadband Network in Central NSW is a good investment in Australia's future." Evidence completed, the witnesses withdrew.

At 10.15 am the committee adjourned and resumed at 10.35 am.

Mr Peter Hitchiner, Principle of Insight Telecommunications, was sworn and examined. Evidence completed, the witness withdrew.

Ms Kathy Meleady, Director Statewide Services Development, Mr Craig Smith, Acting Chief Information Officer and Dr Robert Herkes, Intensive Care Unit Consultant at the Royal Prince Alfred Hospital and Co-Chair, Intensive Care Taskforce of the Department of Health were sworn and examined.

All three witnesses agreed to provide additional information in response to questions.
Evidence completed, the witnesses withdrew.

Publication of Hansard
Resolved, on the motion of Mr Provest, seconded by Mr Harris:
That members agree to publish the transcript once witnesses have had the opportunity to correct it.

Additional questions
Resolved, on the motion of Mr Harris, seconded by Mr Martin:
That the witnesses from the Department of Health be asked to provide:
a) any information about the cost benefit analysis of telehealth services compared to traditional methods of providing rural and remote health services such as transport and time costs for specialists and patients, especially if such analysis was undertaken prior to installing the systems
b) examples of where telehealth has been used.

The hearing resumed at 11.50 am.

Mr John Newcombe, Director of Education Planning & Private Forestry, Primary Industries Business Group and Ms Fran Schonberg, Manager or the Office of Rural Affairs from the Department of Industry and Investment were sworn and examined via teleconference.
Evidence completed, the telephone hook up was ended.

Mr Stephen Wilson, Chief Information Officer for the Department of Education and Training was affirmed and examined.
Mr Wilson undertook to provide additional information in response to questions.
Evidence completed, the witness withdrew.

The committee adjourned at 12.58 pm until 10.15 am on Thursday 20 May 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 6)
10.16 am, Thursday 20 May 2010
Room 1254, Parliament House

Members present
Ms Hornery MP (Chair)
Mr Besseling MP   Mr Martin MP
Mr Provest MP   Mr Stewart MP

Apologies
Apologies were received from Mr Constance and Mr Harris.

Minutes
Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the minutes of the meeting on 23 April 2010 be confirmed.

Public hearing 19 April 2010
The committee noted the prior correction to the hearing transcript for the 19 April 2010.

Public hearing 23 April 2010
The committee noted the transcript from the public hearing 23 April 2010.

CENTROC submission to National Broadband Network
The committee noted the CENTROC submission to the National Broadband Network: *Regulatory Reform for 21st Century Broadband Discussion Paper April 2009* as discussed at the public hearing 23 April 2010.

Revised meeting dates for 2010
The committee noted the revised meeting dates.

Follow up of correspondence to Senator Conroy
Resolved, on the motion of Mr Besseling, seconded by Mr Martin:
That the committee follow up a response from Senator Conroy to correspondence on 17 March 2010 regarding advertising by service providers.

General business
The Chair reported on the 17 May 2010 visit of inspection to the CSIRO ICT Centre at Marsfield. Copies of the PowerPoint Presentation from the visit were tabled. The committee noted that the CSIRO will be sending further information on their broadband research projects including e-health programs.

The committee discussed potential visits of inspections to Tasmania and Norfolk Island. committee agreed to find out more information on broadband cabling on Norfolk Island.

The committee noted the change in secretariat arrangements.
Resolved, on the motion of Mr Besseling, seconded by Mr Martin:
That the committee write a letter of thanks to previous Committee Manager, Ms Vicki Buchbach.

The committee discussed indicative reporting timeframes for its two inquiries.

The committee adjourned at 10.32 am until 10.15 am on Thursday 24 June 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 7)
10.15 am, Thursday 24 June 2010
Room 1136, Parliament House

Members present
Ms Hornery MP (Chair)
Mr Besseling MP   Mr Martin MP
Mr Provest MP

Appendix Four

Apologies
Apologies were received from Mr Constance, Mr Harris, and Mr Stewart.

Minutes
Resolved, on the motion of Mr Besseling, seconded by Mr Provest:
That the minutes of the meeting on 20 May 2010 be confirmed.

CSIRO Information Pamphlets
The committee noted the information pamphlets received from the CSIRO ICT Centre.

Correspondence
The committee noted correspondence from the Federal Minister for Broadband, Communications and the Digital Economy.

Response to Questions on Notice 19 and 23 April Hearings
Resolved, on the motion of Mr Martin, seconded by Mr Provest:
That the committee notes the responses to questions on notice from the Department of Justice and Attorney General, the Department of Health and the Department of Education and Training publishes them on the Committee's website.

General business
The committee discussed potential visits of inspection including viewing a court hearing conducted by video conferencing. The committee agreed to find out whether or not they could attend a court hearing.

The committee adjourned at 10.28 am until 10.15 am on Thursday 9 September 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 8)
10.16 am, Thursday 2 September 2010
Room 1254, Parliament House

Members present
Ms Hornery MP (Chair)

Mr Besseling MP	Mr Harris MP
Mr Provest MP	Mr Stewart MP

Apologies
Apologies were received from Mr Constance and Mr Martin.

Welcome to new secretariat member
Ms Hornery welcomed the new Senior Committee Officer on the secretariat, Ms Rachael Fraher.

Minutes
Resolved, on the motion of Mr Besseling, seconded by Mr Provest:

That the minutes of the meeting on 24 June 2010 be confirmed.

Possible visit to Downing Centre
The committee discussed the possibility of visiting the Downing Centre to view the use of video conferencing facilities in court hearings. The committee agreed to investigate possible dates to attend and that a Monday afternoon of a sitting week was the preferred time.

Resolved, on the motion of Mr Harris, seconded by Mr Besseling:
That as many members as wished should attend the proposed visit of inspection to Downing Centre on a date to be determined.

General business
Mr Besseling proposed that the committee further investigate State Government action on the committee's Recommendation 14 in the *Beyond the Bush Telegraph* report to allow the community access to broadband at State Government facilities outside of operational hours. The committee was particularly interested in whether this was being implemented in schools.

Resolved, on the motion of Mr Besseling, seconded by Mr Harris:
That the Committee follow up with the Department of Education and Training about the committee's recommendation.

The committee adjourned at 10.32 am until 10.15 am on Thursday 9 September 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 9)
10.16 am, Thursday 9 September 2010
Room 1254, Parliament House

Members present
Ms Hornery MP (Chair)
Mr Martin MP   Mr Provest MP

Apologies
Apologies were received from Mr Besseling, Mr Constance, Mr Harris and Mr Stewart.

Minutes
Resolved, on the motion of Mr Provest:
That the minutes of the meeting on 2 September 2010 be confirmed.

Availability inquiry take note debate
The committee discussed the upcoming take note debate on the committee's report entitled, "Are you connected? Inquiry into telecommunications availability in rural and regional communities". Mr Martin and Mr Provest expressed an interest in speaking.

Community access to broadband in public schools
The committee discussed the response from the Department of Education and Training to the Question on Notice from the 23 April 2010 hearing regarding community access to broadband in public schools. The committee noted the Department's response which identified significant operational, regulatory and legal issues and barriers to allowing the community access to broadband in public schools. Accordingly, the committee decided not to pursue the matter further.

Possible visit to Downing Centre
The committee discussed arrangements for the proposed visit to the Downing Centre to view the use of video conferencing facilities in court hearings.

Resolved, on the motion of Mr Provest, seconded by Mr Martin:
That as many members as wish should attend the visit of inspection to a Sydney court complex on Monday 18 October 2010.

The committee adjourned at 10.26 am until 10.15 am on Thursday 23 September 2010.

Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 10)
10.15 am, Thursday 28 October 2010
Room 1254, Parliament House

Members present
Ms Hornery MP (Chair)
Mr Besseling MP   Mr Provest MP

Apologies
Apologies were received from Mr Constance, Mr Harris, Mr Martin and Mr Stewart.

Minutes
Resolved, on the motion of Mr Provest:
That the minutes of the meeting on 9 September 2010 be confirmed.

Report on visit to Downing Centre, Monday 18 October 2010
The committee discussed the recent visit of inspection to the Downing Centre and Sydney Central Local court on Monday 18 October 2010. The Chair thanked secretariat staff for their efforts in organising the visit.

Resolved, on the motion of Mr Besseling, seconded by Mr Provest:
That the report on the committee's visit to the Downing Centre on 18 October 2010 be noted.

General Business
The committee discussed the upcoming visit by Mr Crean, MP, Minister for Regional Australia, Regional Development and Local Government, to Port Macquarie and his meeting with Mr Besseling.

The committee discussed the Departmental response to the issue of community access to broadband in public schools. Members discussed the potential role for the committee in progressing this issue in future.

The committee adjourned at 10.22 am until 10.15 am on Thursday 25 November 2010.

DRAFT Minutes of Proceedings of the Standing Committee on Broadband in Rural and Regional Communities (no. 11)
10.17 am, Thursday 25 November 2010
Room 1254, Parliament House

Members present
Ms Hornery MP (Chair)
Mr Besseling MP   Mr Martin MP
Mr Stewart MP

Apologies
Apologies were received from Mr Constance, Mr Harris and Mr Provest.

Minutes
Resolved, on the motion of Mr Besseling:
That the minutes of the meeting on 28 October 2010 be confirmed.

Consideration of Chair's draft report on the benefits of broadband inquiry
The Chair opened discussion on the draft report entitled: Transforming life outside cities: The potential of broadband services for rural and regional communities

Resolved, on the motion of Mr Besseling, seconded Mr Martin:
That the committee agree to the Chair tabling the report in the House, subject to typographical corrections and formatting by the secretariat.

General business
The Chair extended her thanks to the current and former members of the committee for their contributions to the latest inquiry and the broader work of the committee. The Chair also thanked the secretariat for their support and efforts.

The committee noted the achievements and outstanding works of the committee since it commenced in 2007. The committee commended the Chair on her leadership, particularly as she commenced mid way through the committee's term.

The committee also recognised the valuable contribution of the secretariat to the work of the committee.

The committee adjourned at 10.22 am.