**Summary Report**

# Communications Infrastructure Strategy

# Green Square Development

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**For the**

**South Sydney Development Corporation**

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# Index

# 1. Background

*This is a shortened version of a report prepared for the South Sydney Development Corporation in 1999.*

The Green Square Community Plan[1] raised some inspiring visions of the contribution technology may make to future quality of life in the area. For instance increased 'connectivity' could *"act as a catalyst for greater social interaction and participation".* It also suggested that synergies may be established *"between economic development, education and knowledge, cultural industries, new technologies, urban design and social capital."*

However it also posed significant challenges; in particular how could such potential be converted into a reality in the planning stages, through the development of the Growth Centre, to a maturing community?

The first goal of the Community Plan's strategy was the creation of a *'Smart Community'.* The core purpose of this paper is to address this proposition.

A Green Square Communications Infrastructure Study was presented to the South Sydney Development Corporation in April 2000. This paper evolved from that Study and has been prepared for the purposes of both consultation and implementation.

# 2. Basic definitions

This section introduces the reader to some basic definitions and observations about the current environment.

## South Sydney Growth Centre

The South Sydney Growth Centre is a 487 hectare area around Green Square station designated by the State Government for redevelopment. Running east to South Dowling Street, south to Gardeners Road, west to Euston and Campbell Roads and north to Crescent Street, the Growth Centre includes parts of Alexandria, Beaconsfield, Zetland and Rosebery.

[1] The Green Square Community Plan was completed in August 1999

## Information and communication technologies (ICTs)

ICT is a generic term embracing consumer electronics, computing (hardware, software and services) and telecommunications.

The ICT concerns both the processing of information and the transference of data (text, pictures, video and voice) by electronic means.

## Bits and a bytes

Bits and bytes measure the size of data, but are frequently confused.

A bit is the smallest element of information and is expressed in terms of “1” and “0”. The term bits/second is used to measure the data transfer rate between two modems or the rate of data sent over a local area network.

A byte is a computing term that generally consists of 8 bits. The page you are reading is 21 Kilobytes (Kb). A kilobyte is 1024 bytes. Data transfer rates are often quoted in terms of bytes/second. Hard disk capacities are usually quoted in bytes (could be KiloBytes or MegaBytes which are a million bytes or 1000 kilobytes).

## Hardwire

Hardwiring is a misleading term because it does not always refer to wires. It is the fixed infrastructure used to transfer information from one point to another. In this paper it includes cables, wireless links (point to point), satellite, telephone exchanges etc. Mobile radio systems are not ‘hardwire’ as the phone can be used whilst on the move.

## Bandwidth

Bandwidth measures the number of bits and bytes that can be transferred across a particular type of infrastructure per second. For instance a modem using a telephone line can transfer data at rates up to 56 Kbits/sec.

Bandwidth is important if the service you want to receive requires the transfer of large amounts of data. Anyone who has tried to watch a live video feed from a web site using a modem and the telephone line will know how frustrating a lack of bandwidth can be. A Christmas video conference with overseas relatives is equally frustrating if there is not adequate bandwidth.

As new multimedia ICT services develop, such as video telephony, more bandwidth will be required to reduce delays and

to improve the quality of pictures. It follows that if a resident or business does not have adequate bandwidth, their choices and the benefits they gain from some of the newer Internet-delivered services will be limited.

# 3. What is meant by a Smart Community?

The World Foundation for Smart Communities Guidebook[2] defines a Smart Community as:

*"a geographical area ranging in size from a neighborhood to a multi-county region whose residents, organizations, and governing institutions are using information technology to transform their region in significant ways. Cooperation among government, industry, educators, and the citizenry, instead of individual groups acting in isolation, is preferred. The technological enhancements undertaken as part of this effort should result in fundamental, rather than incremental, change."*

In Canada, the Greater Victoria Economic Development Commission[3] presents a definition of a Smart Community as one driven by government and private sector services being digitally transformed:

**S**ervices through ..

**M**ultiple

**A**ccessible

**R**esponsive

**T**ransformative technologies

They list the type of technologies they are referring to as “copper wire; interactive cable; micro waves; satellite links; cellular; radio and television broadcasting and narrow casting; video conferencing; facsimile and e-mail; Multimedia; interactive voice response (IVR); personal computers; and the Internet. “

## Strategies to develop smartness

The key, they claim, is a community’s strategy to develop applications that will meet local objectives through “the convergence of any number of these resources”.

For this to occur the Commission suggests a number of factors must exist:

- “recognition of the need to improve services to citizens
- a commitment to aid job creation through economic stimulation

[2] www.smartcommunities.org

[3] www.bizvic.com/page_1.html

- an understanding of capabilities of new communications technologies, with an emphasis on;
  - maximum quality and speed of information retrieval
  - minimum cost of the technology to the end user
  - acceptance by information and service providers of this as a practical communications system."

The Lanark Community Network is a community of rural areas and small towns with a total population of 55,000 located southwest of Ottawa. They claim to have successfully pursued a comprehensive approach to the upgrading of telecommunications infrastructure and the implementation of broadband network applications.

Its vision is to:

- "make information technology (IT) and connectivity affordable, relevant and ubiquitous in our community;
- educate and train our citizens to make them IT-fluent; and
- transform our community into an Information-Age society that manages IT as a source of competitive advantage and wealth creation"

## The 'smartening' of communities is happening …

Australian communities are adopting technology at a rapid pace and there is no doubt that a high proportion of both individuals and businesses that move into Green Square developments will require bandwidth.

In November 1999 the Australian Bureau of Statistics reported that a half of Australian households own a computer and 44% of the adult population had accessed the Internet in the previous year. The usage was highest in urban areas. This puts Australia near the top of the world's Internet access league table.

The growth in the number of mainstream services being delivered over the Internet suggests the 'smartening' of Australian communities is gathering pace. Increasingly business is seeking competitive advantage by using the Internet for business to consumer (B2C) transactions.

> The Online Shopping market is expected to grow to 3.8 million users (20% of the Australian population) by the end of 2000, representing a significant potential market for online retailers.
>
> (Source: www.consult: Australian Online Shopping Report, July - December 1999)

## … and it brings structural change

The rate at which technology is being taken up presents a challenge to many traditional businesses, particularly those that will suffer by being cut out of the supply chain or 'disintermediated' as the industry terms it:

> "SORTING OUT MAIL'S PLACE IN INTERNET AGE
> The U.S. Postal Service, like many traditional, brick-and-mortar businesses, is trying to develop an Internet strategy to avoid losing billions of dollars to e-commerce rivals. Over the next several years the Postal Service says it could lose up to $17 billion in first-class mail because of e-commerce.
>
> (Washington Post, 24 Jan 2000)"

The postal system is not alone in revisiting its core role. The migration of business from the physical to the virtual not only increases the capacity of businesses to trade globally, but also requires fewer people and less space.

In 1997 an Arthur Andersen report[4] for the Property Council of Australia claimed that this trend would change the commercial real estate market dramatically as:

> "virtual spaces (technology) increasingly replace physical places (real estate) as a medium for doing business. Historic *infrastructure* is being replaced by emerging *infostructure*".

The capacity for manufacturing and wholesale businesses to by-pass retailers and trade directly with consumers, they suggested, will have a significant effect on the demand for commercial real estate. The report didn't pull its punches:

> "Clearly, technology creates rapid obsolescence of real estate assets of all types."

The impact of the smartening of communities is not limited to commercial properties. Technology allows people to work remotely. The rapid increase of 'telework'[5] and home based businesses will have consequences for the residential property market.

The challenge for the property developers is not so much to predict trends, but to build developments that have the flexibility to adapt to this rapidly changing environment.

## This pace of change may also create a divide

While Australia is 'smartening' rapidly, it is not necessarily happening evenly and there may be a gap developing between the 'information rich' and the 'information poor'. This point was

[4] Real Estate and Technology in the Knowledge Economy – a Vision for the Future

[5] Working some distance away from the employer's office

emphasised in the Green Square Community Plan where the spectre was raised of a potential division between the 'connected' new residents moving in next to the lower socio economic communities of Redfern and Waterloo.

The Digital Divide is an American term that describes the gap between those who have access to technology and those who don't. It contains the underlying assumption that if you are not connected you may be both financially and educationally disadvantaged; either by cause (the disadvantaged are less likely to be connected) or by effect (you are disadvantaged if you are not connected).

Most US research suggests there is a connection between socio economic conditions and the likelihood of computer ownership.

A report titled "Falling through the Net; Defining the Digital Divide" has documented a constantly widening gap between those with and without Internet access in the US. Findings included:

- households with incomes of US$75,000+ are more than twenty times more likely to have access to the Internet than those at the lowest income levels, and more than nine times as likely to have a computer at home;
- between 1997 and 1998, the divide between those at the highest and lowest education levels increased 25 percent, and the divide between those at the highest and lowest income levels grew 29 percent.
- Whites are more likely to have access to the Internet from home than Blacks or Hispanics have from any location.
- At the lowest income levels, those in urban areas are more than twice as likely to have access than those earning the same income in rural areas

In Australia the concept of digital divide is not as well documented, although the majority of publicly funded ICT programs have been targeted to the gulf between metropolitan and rural Australia.

- At February 1999, 18 % (1.3 million) of all households in Australia had home Internet access.
- At November 1999, a half of Australian households used a computer at home.
- At November 1998, 14.3% (607,000) of all 4.25 million concession card holders aged 18 or over had accessed the Internet in the last 12 months.

While there appears to be evidence of a connection between income and educational attainment and access to technology, there is very little commentary about *how* a citizen will be

disadvantaged if not connected. Indeed one report suggested that a significant proportion of the population are "technologically disinclined" and choose not to be connected.

The research team suggested a number of (marginal) disadvantages for those businesses or individuals that are not connected:

- E-mail (documents can be transmitted at a fraction of the cost and many times the speed of traditional mail)
- Internet banking (the Bpay system now allows transfers to 3rd parties, including employees. St George Bank, for instance, currently does not charge individuals or businesses for such Internet transactions).
- Trade of stocks and shares (lower brokerage fees)
- Purchase of items through classified advertisements (the Trading Post and many other services can be accessed and searched at no cost over the Internet)
- Certain items purchased overseas that are exempt of Australian taxes (Compact Disks for instance)
- Tax lodgement (on 14th January 2000 US Today reported: "People who file their taxes by personal computer would receive a $10 tax credit under terms of a plan President Clinton will propose to Congress.")

As more services are delivered electronically it is reasonable to assume that these, relatively minor, disadvantages will grow in significance.

## Local government can lead the way

Local government has the opportunity to act both as a leader of initiatives that can bridge a local 'digital divide', and as a service provider that addresses its cost structures in a way that delivers better value for money to residents and businesses.

These days few residents visit their local council to do business. The majority of business is conducted over the phone, even in urban areas. One Sydney council[6] with a population of 60,000 logged 40,000 in-coming calls per month. The transition to electronic service delivery by South Sydney City Council, for instance, would present many advantages to its connected residents.[7]

[6] 1997 survey in Waverley Council

[7] The council is not connected to the Bpay network with the result that a Green Square resident can not pay rates and other bills electronically

### Wollongong City Council – www.wollongong.nsw.gov.au

The Wollongong City Council is perhaps the best example of a local government organisation in Australia making the first steps to full online service delivery.

Unlike many Council sites the Wollongong site is extremely comprehensive and dynamically updated and gives extremely detailed view of what the council does and what services it can offer to the local community.

A key component of the site is a built in self publishing procedure that allows council staff with no web design experience to very easily publish a range of up to date information, via templates developed by design professionals, onto the website. A brief perusal of the news section demonstrates the success of this approach as it showed the last five published articles none of which was more that one week old.

Most notably the site has a "Community Connections" section that could – by some definition of the term – be seen as a community Intranet. Focusing on the network of Council supported neighborhood committees, it provides each of these groups with a publishing space allowing them to store and index meeting minutes for online retrieval. Members of the community can locate their committee area by means of a reference map. Once they locate themselves a single click takes them into a properly indexed, web viewable archive of committee business. Most of the 10 committee sub sites had very recent minutes published and all had notices detailing the time and place of the next meeting.

**Relevance to Green Square:** A more realistic and useful angle on the idea of a Green Square Intranet. This site is a very high quality demonstration of distributed community based information management and dissemination.

There are many international examples of local government sponsoring initiatives that connect local people.

Global corporations are beginning to offer solutions to government agencies that want to create smart communities. Oracle Consulting[8] quotes a number of international examples:

> "Creating a *Smart Community* is actually very straightforward … initial implementation can take as little as six months. Infoville, in the Valencia region of Spain, is a *Smart Community* organized as a portal... (that) was developed to be available to Infoville's four million inhabitants through PCs, public kiosks and interactive TV. To date, nine cities in the region are connected to the web, giving citizens access to 200 plus different services such as access to bank accounts, bill payment, making hospital appointments, and updating personal data such as address changes. Residents can participate in chats with relatives, local authorities and teachers from the nearby schools. A local news service also keeps the population informed with up-to-the-minute city news.

While our research did not reveal a comprehensive strategy to create a 'Smart Community' in an Australian region, there are examples of local government initiatives.

[8] PR Newswire 7/3/2000

### Global Infolinks (GIL) – http://www.gil.com.au

This commercial unit of the Ipswich City Council was set up in 1994 to provide affordable internet access at a local call at a time when the only option for internet access was via STD call to Brisbane. The project essentially involved the local council being the first organisation (and so far one of the only) to establish an Internet POP (point of presence) in Ipswich. The actual internet service started out as a public access unit in Library but has since grown to a full service provider. It should be stressed though that GIL does not provide any physical infrastructure.

GIL is a profit making enterprise and services a range of commercial customers. However all local rate payers receive a 10% discount and can elect to pay for service in cash or by check. This facility is seen by GIL as a key strategy for encouraging low income access. According to Andrew Nusky at GIL, "Ipswich is a blue collar area with high levels of unemployment. There aren't that many people who have credit cards in town and most Internet service providers wont give you an account unless you have one".

**Relevance to Green Square:** While not in a similar situation to Green Square, GIL has had some success in removing barriers to Internet access by low income earners. As the Green Square area sits within a local government area that is home to many low income earners GILs experience may be useful in avoiding the creation of a "digital divide" in the South Sydney local government area.

## Three Green Square questions.

- Can technology help the process of community building?
- Is South Sydney City Council prepared to take a leadership role, both as service provider and as facilitator of community technological development?
- What strategies can the South Sydney Development Corporation adopt that will portray Green Square as a "smart community", attractive to businesses which require information and communication technologies in order to gain competitive advantage? Such businesses may be a sole trader operating from a residence, or larger enterprises considering relocation to a Green Square commercial property.

The next section takes a look at examples of technology being applied to communities.

# 4. Technology and community building

There are local and international examples of how new technologies may benefit residents in local communities. These include use of technology by local organisations to enhance residents' access to information and services, and the development of local communications centres (eg Internet cafes and telecentres) to promote easy and equitable access to the new technologies among community members.

## Applications of electronic community networks

The principal application aimed specifically at community building, however, has been the development of electronic community networks. These most commonly take the form of an Internet site which brings together an array of information and services of relevance to people within a specified geographic catchment area and a means for community members to communicate with each other electronically.

While electronic community networks can take many forms, basic characteristics include *(Hall, S 1997)* :

- Networks are designed to serve the common interests of a geographically defined community.
- Objectives of social inclusion. Efforts are made to ensure the network is relevant to and inclusive of all members of the community and not just traditional computer users.
- Community ownership and democratic participation in the network and its management.
- A central physical point to manage collection, organisation and distribution of information and provide training and technical support.

The potential uses and benefits of electronic community networks have been widely canvassed in the literature. They include:

## Social interaction

Potential for increased social interaction among community members and easy access to each other. Specific uses include:

- development of linkages among people with common interests;

- in particular, collecting like minded people into sub-communities that can take collective action on issues of concern in the community;
- integration of newcomers to the area wanting to meet others;
- new ways to establish connections among existing sub-communities and interest groups;
- discussion groups on local topics and a forum for open discussion, debate and expression of different viewpoints about community related subjects. Such discussions are not restricted by location, time or social grouping and so more democratic communication is facilitated;
- enhanced capacity for social interaction and community expression for house-bound people, including older people, people with a disability and their carers;
- exchange of local goods, skills and services, participation in buy/sell bulletin boards, swap shops and trading posts;
- development of linkages between the "work rich" and "work poor";
- interactive communication between residents and local service providers such as schools, council and leisure and cultural facilities.

It is stressed that community networks are not intended to replace face to face patterns of communication but can reinforce them by providing connections among people who can arrange to meet subsequently for face to face discussions.

**Blacksburg Electronic Village**

Readers who wish to explore international examples should start by visiting the "Blacksburg Electronic Village" (www.bev.net) one of an estimated 400 active community network projects in the USA. It has been heralded as one of the best examples of community networking and is the subject of a study, "Community Networks: Lessons from Blacksburg, Virginia[1]". While the book is not an independent evaluation it supplies a valuable narrative on the project. A copy of the book can be obtained from its web site.

**Relevance to Green Square**: a valuable "how to" source of reference.

## Local information

A central source of local information, providing easy access to information and improved information flows. Specific uses include:

- directories of local services, facilities and businesses;
- local council information, including council minutes, agendas, rosters and schedules;
- local neighbourhood news, community newsletters, notice board, important community announcements and calendar of local events;
- sections on local arts and entertainment;
- local advertisements and local job vacancies;
- special topic lists and local newsgroups;
- local histories and historic photos;
- tourist and new-resident information;
- census data, maps and future plans for the area's development;
- participation in elections, surveys and community petitions.

Common objectives in improving access to information include:

- to empower local people by provision of access to information and resources;
- to enable people to become more involved in decision making processes that affect their lives;
- to help develop the skills and knowledge base of community members;
- to encourage residents to become more involved in community activities and events and participate in the life of the community;
- to help produce informed citizens and reinvigorate the democratic process.

### Bigtree Online – www.bigtree.com.au

Operated from Federal near Byron Bay, Bigtree Online is a new venture exploring the use of the Internet as a way of delivering training.
The company's first major venture is a training regime for technical support staff at Apple Macintosh. Bigtree offers a Certified Apple Engineer course, which can be completed remotely at a student's own pace, and culminates in a final exam onsite at Apple's offices. Bigtree is currently working with Apple China, to produce a comparable course in Mandarin.

Bigtree is planning to produce a wide range of online training courses, including pig breeding, drumming (which would include sound files for delivery online), and homebirth.

**Relevance to Green Square:** A well executed example of how a professional or community organisation in Green Square could go about providing online education.

## Access to local services

Easy and convenient access to local services. These may include:

- on-line shopping and financial services;
- payment and access to wide range of municipal services;
- reservations and booking systems for local recreation facilities and events;
- lifestyle support services such as food co-op systems, babysitters, pet minders and gardeners;
- education and educational facilities and other learning opportunities;
- technology training and support services.

Additional benefits are claimed to include encouragement and support of local non-profit organisations, improved delivery of social services, and stimulation to the development of community enterprises and co-operatives and local economic development.

**Making The Net Work**

This jointly funded US/UK site is a very valuable source of information about the Internet and communities. Its aim is to develop 'how to' guidance for those aiming to get their organisation or neighbourhood online, or to create community technology or learning access centres.

**Relevance to Green Square**: Their web site (www.makingthenetwork.org) will be a useful point of reference for Green Square

## Some disadvantages - words of warning

To balance the optimists' viewpoint, the literature also contains some warnings as to the potential disadvantages of the new technologies for community building. These include:

- Reduction of face to face social interaction and gathering at community focal points, such as shops and cafes, which are necessary for a vibrant community;
- Social isolation as more people sit alone at home in front of a computer;
- Potential undermining of traditional forms of social capital as networks decline that enable participants to act together to pursue shared objectives;
- Disappearance of personal information providers, disadvantaging those who prefer more familiar face to face relationships;

- Social division and a widening gap between the “information rich” and the “information poor”.

## A pilot for Green Square?

The lack of experience with electronic community networks in urban Australia points to a need to test the concept through a pilot study, with Green Square being a suitable community in which to apply the idea of a **Green Square Electronic Village**.

Should the Development Corporation wish to pursue this idea, the issues to address are not so much associated with the form of the technology required, for many networks run through the Internet using standard forms of access. Instead, relevant issues to consider include:

- The need for grassroots community involvement in the establishment and running of the network so local people have a high degree of input to its content, aims and objectives to help ensure its relevance;
- How the network is intended to enrich community life – vision and objectives.
- Strategies to maximise access to and utilisation of the network among all sections of the community, including the establishment of public access points within the community;
- Sources of funding and sponsorship;
- The need for a physical base and resources from which to manage the collection, organisation and distribution of information and provide training and technical support to users;
- Issues of control and management.

# 5. Infrastructure Study Summary

## Introduction

The consultant team carried out a survey of Information and Communication Technology providers, including the major carriers, and interviewed developers that had a stake in the area. What follows is an abridged version of the report's conclusions.

## Key Issues From The Infrastructure Study

As things stand, Green Square will not be technologically disadvantaged by comparison to other metropolitan areas; Telstra will lay fibre and copper wires at least to the boundary of all new developments.

With one exception, no developer appears to have planned to provide anything beyond the Plain Old Telephone Service (POTS) to the occupants of their proposed multi dwelling units. This in itself does not disadvantage Green Square residents, as most residents of other suburbs and Green Square's neighbours have the same infrastructure.

However there may be some barriers for those residents and home businesses that want higher bandwidth Internet access than is provided by the POTS. While Foxtel/Telstra will have the capacity to provide its cabled services, there is some doubt about whether residents will reap the benefits of competition. Other services, such as pay TV (and now cable modem Internet access) services provided by Optus, may not access Telstra duct space in order to lay their cables.

Whether or not residents have a choice of services will therefore be dependent on one or more of three factors:

- more space being utilised by competitors in Telstra 'declared' ducts,
- whether the conditions are right for Telstra's competitors to lay their own ducts,
- the plans developers of apartments have to build adequate duct spaces, and to take cabling into their complexes.

The first two of these options reflect national issues:

1. Competitors claim difficulty accessing Telstra duct space
2. For cable TV/Modem services each service provider has to lay its own cables. So, unlike "declared" infrastructure, which Telstra or other owners have to share with competitors,

these services are the property of the service provider. Providing the choice of two such services therefore requires two cables and, potentially, two ducts in a particular street.

Action that can be taken locally to address these issues is proposed in "Ducting: a pathway to ensure capacity for future 'hardwiring'" on page 19 of this report.

## Is there a case for a 'hardwiring' initiative in Green Square?

The 'Community Plan' raised one critical question: should the South Sydney Development Corporation take steps to ensure that all new dwellings/ buildings are "hardwired"?

This study recommends no "hardwiring" initiative be taken, beyond that which may result from our recommendation that expressions of interest be sought from the information and communication technology industry to develop a **Green Square Community Access Network** (see the Conclusion to this report).

We recommend this for three reasons:

Firstly the area will be hardwired. Telstra will be providing fibre and copper at least to the perimeter of all new developments.

Secondly, we have investigated a Council[9] that has tendered out infrastructure development with the result that its citizens benefit both from being "hardwired" and from the pressures of competition. The driver for this project was initially the need for a range of reasonable priced ICT services for the Council itself, and for its communities in country South Australia. It is not therefore comparable to the situation in inner urban Green Square. Analysis of this project however has helped develop the concept of the **Green Square Community Access Network**, described in the Conclusion. It has also served as a useful example of how a fairly complex communications infrastructure project need not directly involve a major carrier and can conceivably be taken on by a relatively poorly resourced local council.

Thirdly, there are new developments that may make 'hardwiring' in today's terms uneconomical.

A great deal of investment is being committed to new methods of compressing and transferring data that can effectively increase the amount of information that can be transmitted and received over existing infrastructure.

These include:

[9] Coorong Council, South Australia

1. Digital Subscriber Loop (DSL) will offer data services in the range of 1.0Mbit/sec through to 8Mbit/sec. We believe that most carriers will use Telstra copper to deliver their DSL services. DSL services will be offered in a 12-24 month timeframe. Overseas DSL is priced for the domestic market (US West, for instance, was quoted[10] as providing its North American customers with 256kb access for $76 per month) there is no information currently available on the likely pricing in Australia. From experience market driven pressures are likely to drive down Australian tariffs in the medium term.
2. Other utilities, such as power companies are starting to utilise their existing ducts for the installation of telecommunications cables. These organisations are more likely to wholesale bandwidth to service providers rather than act as retail carriers. The entry of utilities such as power companies may change the whole dynamics of local loop cable provision (particularly if data can be successfully transmitted through existing powerlines, as is being trialed).
3. Satellite, and mobile wireless and fixed wireless data services (eg CDMA,WAP and LMDS) are likely to develop rapidly and will offer a range of services including e-mail, Web browsing, E-Commerce etc. However in the short to medium term, wireless data services are unlikely to displace fixed line Internet and will be expensive options.

[10] Sydney Morning Herald IT Section 7th March 2000

# 6. Conclusion – The Way Forward

"The most important advice I have is to plan lightly. By that I mean too much planning can be just as damaging as too little. The technology and network services that flow from the implementation of technology are changing so rapidly that it is difficult to look ahead more than 12 months and know what might happen with any certainty".

"Community Networks: Lessons from Blacksburg, Virginia"

2nd edition 1999 – M Cohill/A Kavanah

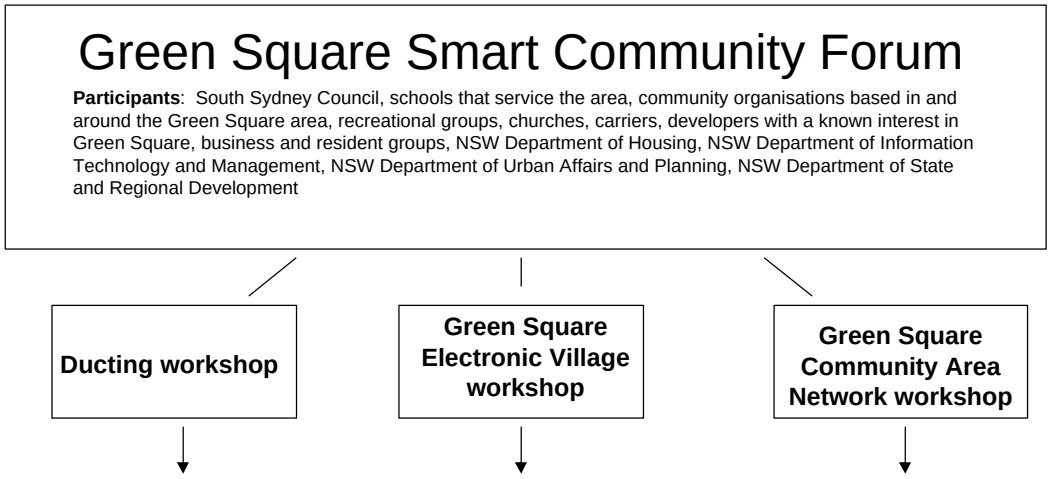
## A strategy for a Smart Community

From the research conducted for this study we recommend that the Corporation adopt the following strategies for 'smartening' Green Square:

- Act to ensure that new residential and commercial developments have the capacity to be hardwired by exploring ways in which the cost of **ducting** in the public domain can be lowered, and by creating standards for ducting in new commercial and residential developments in the private domain;
- Act to address the potential 'digital divide' in Green Square by working collectively with government agencies, community groups and businesses to develop a **Green Square Electronic Village**;
- Act to foster a competitive environment in Green Square by attempting to establish a **Green Square Community Access Network**. Do this by specifying the services to be provided and then call for expressions of interest from carriers and other providers to supply these services.

These three initiatives are described in more detail below.

The process for implementing these initiatives is described in the action plan and can be represented as follows:




Implementation plans

## Ducting : a pathway to ensure capacity for future 'hardwiring'

The report has already stated that no hardwiring initiative should be taken. However while the availability of affordable services and bandwidth is dependent on physical cabling we recommend the Corporation take steps to ensure that Green Square residents and businesses have the capacity to adopt the latest developments when they are available and affordable.

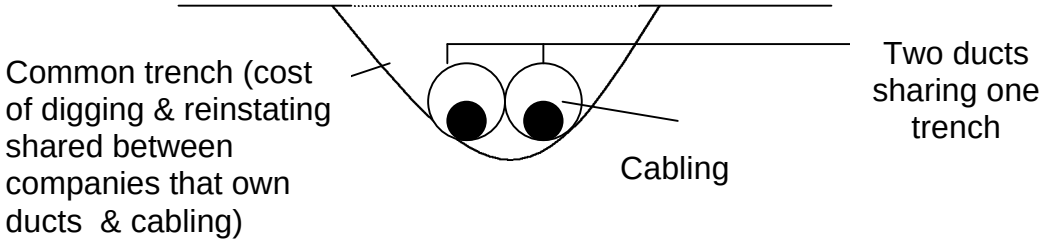
We believe the core issue here is the availability of ducting in three domains:

- private domain; commercial developments and residential units and housing
- private/public; infrastructure such as roads that are built as part of new campus-style developments before being handed over to local government
- public domain; infrastructure that is managed by public authorities such as roads, pavements, canals, parks etc

## Recommendations for ducting

Three recommendations have evolved from the Communications Infrastructure Study:

1. **common trenching and duct sharing** be encouraged wherever possible in the public and private/public domain in the Green Square area.




2. **best practice guidelines** for ducting in the private domain be developed in consultation with interested parties and that all new developments should observe these guidelines as a condition of gaining development approval from the South Sydney City Council.
3. South Sydney City Council should explicitly record the **ducting standards** used in all constructions for future reference.

In order to implement these recommendations, we suggest that the Development Corporation facilitates a workshop for communication between all groups with an interest in providing, using or regulating communications ducting in both the private and public domain. This should include representatives from developers, communications carriers, South Sydney City Council and State Government (Dept. of Information Technology, Dept. of Urban Affairs and Planning etc.).

The purpose of this workshop would initially be to define best practice guidelines for the provision and administration of telecommunications ducting in the South Sydney Local Government Area. Future meetings would seek to continue dialogue between parties to ensure that – wherever possible – barriers to the implementation of new technologies and services are identified and removed.

Specifically, the first meeting of the workshop should concentrate on defining guidelines for private domain ducting in reference to established Australian Standards. South Sydney City Council should consider adopting these guidelines as part of the development approval process. During this process consideration should be given ducting *within* units of new developments that will support current and developing technologies throughout an apartment. As a side effect the Council should be encouraged to compile and maintain a database of private domain ducting in Green Square.

The workshop should also consider the more ambitious strategy of moving toward a shared online trenching calendar for Green Square. Due to the inconvenience and expense of trenching it is

useful for organisations wishing to lay cable (or other services) on a particular route to know what other groups are proposing to do the same and at what time. Where a commonality of needs is established shared trenching is encouraged.

One idea would be for an online calendar to form the centrepiece of a website that is designed specifically to service the needs of telecommunications carries and other utilities operating in the Green Square area. Contributors to the calendar would be encouraged to participate in the ducting forums and vice versa. In this way, communications carriers could become the first corporate citizens of a Green Square Electronic Village.

## The Green Square Electronic Village: develop community-based electronic services

Against this the Corporation will need to consider what action it can take to ensure that the growth in population does not result in an area where there is a division between the information rich and the information poor; those who do not have access to infrastructure, equipment and services for social, economic or educational reasons.

We recommend that all action in this respect should involve other stakeholders in the area and environs. These include South Sydney City Council, schools that service the area, the Dept. of Housing, Dept. of Education, recreational organisations, the community groups that service Green Square, Waterloo, Redfern and other adjoining suburbs, carriers, developers, local business and resident representatives.

This recommendation may appear unambitious, however all our research indicates that the success of electronic community networks is not dependent upon technology. The principle of an organisation that runs a network is to ensure equitable access to technology and to make sure that all sections of the community are aware of the opportunities available to them, and educated enough to take up the opportunities. Here are some of the lessons that the Blacksburg network quotes[11] after 20 years experience:

- ✓ “education rather than technology should be the focus of a community network
- ✓ Show, do not tell, community members how to use the technology as a way of increasing use of the network in the community
- ✓ Identify a project evangelist who can speak eloquently on the human use of this new communications tool
- ✓ Public libraries are a primary focal point for community network education and use to ensure equality of access

[11] “Community Networks: Lessons from Blacksburg, Virginia” pp335/6

- ✓ Content drives community use of the network; breadth and depth are both important
- ✓ Invest in an independent telecommunications infrastructure
- ✓ Encourage public/private partnerships
- ✓ Community support from all segments of the population is critical"

In view of this we recommend that the Corporation initiate:

- a series of workshops for the community and other stakeholders with the aim of increasing awareness, promoting involvement with an electronic future in Green Square. These workshops will also provide evidence of demand for an electronic community facility. It may also establish a valuable forum that can provide input to planned developments that may include low cost access to technology (eg the South Sydney Branch Library planned for Green Square), local information and educational services.
- seek a local stakeholder, or facilitate the establishment of a new organisation to establish a Green Square Electronic Village. In addition to the organisations educational role, the network itself should be designed to enhance community networking and, at a minimum, should be resourced to provide and maintain:
  - E-mail addresses to all Green Square citizens and businesses regardless of their ability to pay
  - a portal to other web sites that reflect the communities of interest in Green Square (including South Sydney City Council website , banking, on-line trading etc)
  - list servers and news groups (allowing the capacity for citizens to develop group purchasing, social capital transactions etc)
  - secure areas for private "password protected" networking

Note that none of these recommendations suggests that the initiatives be funded, managed and run by the Development Corporation. Our view has been that the Corporation facilitates community initiative and acts as builder of the community's capacity to act for itself . Funds should be sought only after a business plan has been developed and the option of GSCAN (see below) explored.

## Green Square Community Access Network (GSCAN): benefiting from a competitive environment

There are three ways of obtaining the information and communications services for individuals or businesses.

1. By subscription to standard off-the-shelf services offered by a communications carrier or service provider.
2. By building a closed user group communications network.
3. By using the marketing power of an "affinity user group" [12] to obtain preferential services and tariffs.

A number of off-the-shelf services are already available to residents and businesses. However this report questions whether more couldn't be done to stimulate the type of competitive environment that will extend these services to provide broadband services at competitive prices.

The study has also stated that there is no economic or technical justification for building a Green Square closed user group communications network (the so called 'hardwiring' of Green Square).

Our recommendation is that the South Sydney Development Corporation test the current market by calling for expressions of interest to create what we have termed a Green Square Community Access Network (GSCAN). We recommend a 3 phase process:

1. The Corporation attempts to form an "affinity group" comprising developers, South Sydney City Council, residents and community groups. The idea is for these interests to use their combined purchasing power to obtain both better services and lower tariffs.
2. The affinity group defines what services it wants to receive. We suggest at minimum the group will be seeking suppliers of:
   - Telephone services
   - Internet access at broadband data rates
   - Continuous e-mail connectivity

   It should also consider as part of the specifications the provision of:
   - A dedicated Internet server to be managed by a community-based organisation
   - E-commerce facilities for local businesses
3. Advertise an expression of interest to carriers and services providers

[12] An "affinity user group" is a group of individuals or companies which share common features. This can be related to physical location or perhaps some common business interest. SITA the airlines association is a good example of an "affinity user group".

This strategy has a number of characteristics that we believe the Corporation should view as positive:

- It doesn't try to 'second guess' the market but seeks to benefit from what competitive pressures currently exist
- It does not require significant up front costs from residents, developers or public sector organisations
- There is an opportunity for the existing plans for the purchase of ICT services by developers, businesses and public sector organisations to be packaged into the expression of interest. This may result in both short and long term cost savings, as well as producing more interest from carriers and service providers. For instance a number of developers may decide to 'hardwire' the units of residential developments so that residents have fast permanent Internet connections.
- It does not imply 'exclusivity'. In other words the expression of interest would specify the range of services that are to be provided, but would not guarantee subscription by residents or businesses. The affinity group would be offering the supplier/s:
  - The exclusive use of the 'brand' Green Square Community Access Network;
  - A contract to supply specific services to those members of the affinity group that wish to 'tie in' a price.

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Implicit within these recommendations is the South Sydney Development Corporation's belief that, to be successful, these strategies need to benefit from the views of the community, business and government agencies that have an active interest in Green Square and its environs.

This paper is offered as a starting point to these consultations.