Changing Contours, Changing Technology: Aboriginal Participation in Administration in the Northern Territory

Dr. Perry Morrison
Morrison Assoc. Pty Ltd[1]
perrymorrison@yahoo.com

1.0 Introduction

Many international bodies and agencies such as UNDP and the World Bank are embracing IT, telecommunications and the Internet in particular as promising new vehicles for accelerating development of the least developed countries[2]. In part, this support is based on the need for such countries to move beyond primary production and cash economies and for them to partake in the opportunities afforded by e-commerce and the emerging cyber-economy. In addition, Internet and related technologies are being investigated as more efficient mechanisms for delivery of government services, health care and a huge range of civil administration in remote areas.

A number of Federally funded projects are now underway in the Northern Territory with the common task of improving access and usage of internet, e-mail and broadband applications such as videoconferencing. Indeed, Australia is in the interesting situation of possessing virtually first world communications infrastructure over much of the continent while simultaneously having Third World health and living conditions amongst its remote Aboriginal peoples. This combination is an interesting test case of the promise of modern telecommunications to kickstart e-commerce and communications mediated development in the Developing World. However, as this paper will demonstrate, technofixes for complex political, economic and social problems are not as simple as they seem, and the issues revealed in the Australian context have a strong resonance with the promises of the green revolution and earlier "trickle down" models of economic development based on innovation diffusion.

1.1 Background

The physical geography and human demography of Australia's Northern Territory are extreme to say the least. It occupies 1.35 million square kilometers and yet holds a mere 195,000 people[3] or approximately 6% of the national population. Aboriginal people make

[1] Morrison Associates Pty Ltd, perrymorrison@yahoo.com
[2] For World Bank Projects see http://www.worldbank.org/infodev/projects/funded.htm; its IT strategy can be found at http://www.worldbank.org/infodev/projects/funded.htm. For imminent and past international conferences on IT/telecoms in equitable and sustainable development see http://www.tasknet.nic.in as well as http://www.iicd.org/index.ap and http://www.un.org/Depts/eca/adf/adf99m.htm

[3] Australian Bureau of Statistics, 1996 Census.

up 28% of the NT and 70% of them live in communities of less than 1,000 people. Many communities hold fewer than 50 people and consist of sheds without power, reliable water or road access.

These Indigenous people exhibit social indicators that place them at Third World levels. Their average life span is approximately 20 years less then nonAboriginal Australians and, like Indigenous populations elsewhere, the incidence of heart disease, diabetes, and chronic obstructive airways disease is at epidemic levels[4]. On the Tiwi Islands North of Darwin, the Menzies School of Health research has reported that the local population exhibits the highest rate of kidney disease of any population on the planet.

In terms of communications, quite obviously these communities face extreme challenges. Poor infrastructure, low skill bases, climatic extremes, cultural issues and simple remoteness make the establishment and maintenance of facilities very difficult. Very high levels of staff turnover also undermines the long term effectiveness of training efforts. In some communities, staff last a matter of weeks and the average stay for local government personnel is between 6 and 12 months.

In general, what urban dwellers would reject as unacceptable in communications capability is usually the norm in remote parts of Northern Australia. Very low bandwidth, unreliable terrestrial links and slow, expensive satellite links make Internet connectivity impossible for a large percentage of Australians who need it the most to help overcome the practical and emotional problems that go hand in hand with extreme isolation.

Although none of these problems can be solved in the immediate future, nevertheless it is obvious that there must be an on-going effort to incorporate remote regions of Australia into the medium of Internet/E-mail and higher bandwidth communications.

1.2 Community Context

The structure of remote Aboriginal communities in the Northern Territory generally involves a clinic, school, essential services officer (power generation, sanitation etc.), women's centre or arts centre, sports/recreation club and community council. The council is mainly comprised of community representatives (elders, traditional land owners and others) but is headed by a council clerk who is appointed by the Northern Territory government. Often a CDEP officer is appointed. The Community Development Employment Program is the equivalent of a "work for the dole" scheme for people living in Aboriginal communities, although those enrolled are not regarded as unemployed for the purposes of federal government statistics.

In terms of the actual running and physical characteristics of these communities, it is an understatement to regard them as places of extremes. Many are cut off by road for up to half the year by flooding from the wet season. Cyclones are a regular feature between

[4] The Aboriginal and Torres Strait Islander Health Information Plan. A report prepared for the Australian Health Ministers' Advisory Council, Aboriginal and Torres Strait Islander Health and Welfare Information Unit, Australian Bureau of Statistics, October 1997.

November and March each year and the central part of the Territory experiences the temperature extremes common to sandy deserts.

2.0 Northern Territory Communications Projects

A number of communications projects have been undertaken in the NT over the last 2-3 years- all funded under the Regional Telecommunications Infrastructure Fund from the sale of Telstra.

The **Outback Digital Network** is "federated" arrangement of five Aboriginal media organisations based in Darwin, Broome, Alice Springs, Cape York and Tennant Creek. ODN is tasked with improving communications in "up to 200 communities" across Northern Australia with approximately $15M in funding set aside from RTIF for this purpose. The range of services to be provided by ODN is not specific and potentially incorporates phone access, internet access, videoconferencing capabilities, local area networks, mobile phone and wireless local loop, and satellite and terrestrial links of various kinds, as well as the range of terminal equipment needed to support these services. At this point, ODN has undertaken a lengthy community consultation process and has been engaged in on-going discussions over the selection of a carrier since January 2000.

The **Electronic Outback Project** is an NT government project funded to the tune of approximately $3M from RTIF and tasked with providing improved communications capabilities in 14 Northern Territory communities initially. EOP is also in the process of finalising its carrier negotiations.

The **Local Government Association of the NT** have completed a number of pilot projects aimed at providing internet access and appropriate training for community council staff. They are now about to undertake an $800,000 RTIF funded project to extend these services to all 66 local government bodies in the NT. By any measure, LGANT's projects have all been outstanding successes- partly because their objectives are clear and achievable and partly because they can be implemented without the need for complex carrier negotiations to deliver commercial viability.

In cooperation with LGANT, **Northern Territory Library Services** have also provided internet access and training in internet usage as well as an introduction to web page design for librarians in rural and remote communities.

The author has been involved in all of these projects (except EOP) as either an implementer or evaluator.

3.0 Basic Objectives

Although each of the above projects have addressed specific groups and needs, there is a common objective in providing increased access to the Internet as well as expertise in its usage. ODN and EOP have had larger objectives- including the provision of bandwidth and equipment to deliver more advanced services.

In general, using communications technology to assist in the development of remote parts of Australia and to address the particular problems faced by remote Aboriginal people is a very attractive notion. Current service delivery to these communities is usually based on a "fly-in-fly-out" mode where bureaucrats and administrators rarely stay for longer than a day or two. This mode of service delivery is horrendously expensive in terms of aircraft hire, salaries and expenses and quite often yields no measurable outcome because cultural events, funerals and other community priorities can conflict with the fly-in visit. Therefore, the notion of remote forms of administration and interaction which allow communities to engage as their priorities allow, and which may also deliver substantial cost savings, is a highly attractive option for many stakeholders. In addition, there is also the possibility of not only demonstrating new service efficiencies, but also introducing completely new kinds of services such as:

- Live access to medical specialists
- Advanced health administration and patient care via distributed health information systems
- Face to face interviews and group meetings conducted by videoconference.
- Application of these capabilities to a whole range of educational, judicial/legal, medical, and civil administrative needs.

Finally, even with unsophisticated web based technologies, there is the opportunity to provide direct access to world markets for local and regional businesses such as art sales, eco and cultural tourism operators etc. And this possibility also offers a form of commercial independence from middlemen and agents which has never been previously possible for Aboriginal people.

4.0 Issues and Obstacles

4.1 Culture

All cultures need to evolve, yet they also need preservation and maintenance and this paradox is as relevant to Indigenous cultures in Northern Australia as anywhere. The cultural and social impact of new communications technologies has a vast literature and if that literature reveals anything at all, then it shows that technological impacts are not predictable in any highly deterministic sense. Small differences in implementation, social

structures, practices and values can bring about vast differences in the impact of a given technology.

Nevertheless, there is an implicit tension between various groups concerned with the long term social impacts of these technologies- and with good reason. All technologies can have negative impacts and in the case of remote Aboriginal communities these may include internet gambling, access to pornography and even exposure to people and groups who would seek to exploit them over that medium.

Ultimately, there is no doubt that these technologies *will* bring about changes in quite unpredictable ways. For example, experiences with Tanami network and trials with ODN have already shown that Aboriginal people adapt very quickly to videoconferencing, whereas bureaucrats are much more uncomfortable with the format- often voicing the concern that they are afraid of appearing "stupid" or incompetent with the medium. Similarly, we have *not* found low literacy levels to be problematic for browsing the internet and Aboriginal people appear to become confident users very quickly. In addition, we have elicited a great deal of enthusiasm for community web pages and web sites advertising both a community's profile and its community business enterprises. Therefore, the issue is perhaps not whether these technologies will have cultural and social impacts- that they clearly will is perfectly obvious- nor even so much what the exact nature of these changes will be (because ultimately I believe they are unpredictable). What is more important is the simple acceptance that these technologies will inevitably be implemented anyway, as well as the importance of Aboriginal people having *control and involvement* in how these technologies are applied from the earliest moment. This is the only possible mechanism for ensuring that advanced communications capabilities have more positive outcomes for these regions than negative ones.

4.2 Politics

The Australian telecommunications industry is a political arena with domestic and international dimensions. Under international law, all Australian citizens have the right to a phone service- the so called Universal Service Obligation or USO and Telstra has the primary responsibility to meet this obligation. In addition, all carriers are required to meet specified levels of performance and service quality. However, it is clear that these obligations are not met in many areas and in many instances. Telecommunications services and assets in regional Australia are very expensive to support and maintain because of the distances involved, climatic conditions and simple access. Hence, maintaining and upgrading services in these regions is an expensive activity for Telstra- an obligation which may not provide acceptable return on capital- and yet one which Telstra cannot simply abandon merely for the sake of commercial viability.

In addition, although these issues are complex enough as they stand, the Australian telecommunications environment itself is changing rapidly as a result of political, commercial and technological developments. The issues of local call charging, the further sale of Telstra, the loss of large capital investments such as the Iridium satellites, the

growth of the Internet and bandwidth provision via cable modem, ADSL, and small diameter dishes for satellite downlinks, are merely some of the developments impacting on communications in Australia at the present time. Superimposed on this is the larger political dimension of regional Australia generally- the withdrawal of banking and government services, falling commodities prices and growing unemployment and the general "ghost towning" of previously viable regional communities. In this context, effective and affordable telecommunications is an important political issue since it offers at least the potential to reverse some of this decline by providing better access to markets, delivering new efficiencies in transport and management and even creating new employment niches such as regional call centres.

Obviously, remote Aboriginal Australians are affected by these regional political issues simply because they live there, and at the same time evidence severe levels of social disadvantage that can be partially redressed by technological means. But their context is nevertheless quite different from other regional Australians. Aboriginal people are not large, direct consumers of services and bandwidth in the way that farmers and many mainstream regional businesses are. Instead, large bureaucracies and dozens of organisations deliver services on their behalf (e.g. ATSIC, health, housing and education departments etc) and consume bandwidth in provision of these services, or else fund community groups and projects to pay for their communications needs.

For example, although many internet connections exist in remote communities, they are primarily used by government and government funded agencies or by private non-Aboriginal individuals and businesses. The concept of disposable income is not applicable to Aboriginal community residents receiving the equivalent of the unemployment benefit and buying goods at the community store that are often marked up by 200% or more. Certainly, although Aboriginal people are avid users of internet and other services when they are free, they are unable to afford these services at any conceivable commercial cost. This is an important point, because it raises the issue of control and involvement and the real possibility of service delivery agencies driving the communications agenda of these communities and even their infrastructure developments, unless Aboriginal community members are a genuine component of the planning, delivery and usage of these services.

4.3 Costs and Who Pays?

The last point is important because it identifies the major client groups in remote communities as centralised bureaucracies or their community based representatives. In either case, it is predominately Federal and State budgets that will be the major purchasers of communications funding for remote Aboriginal communities.

In all of this, the primary issue is who pays for the infrastructure to provide advanced services and the interesting chicken and egg situation it elicits. That is, adequate infrastructure does not already exist in these communities because the return on capital is low. To be blunt, if there was a dollar to be made, the services and infrastructure would

already be there. In addition to the climatic extremes and distances that make maintaining this infrastructure prohibitively expensive, social dysfunctionality in some communities can destroy or damage installations and equipment overnight. The notion of providing expanded capabilities and infrastructure in such a difficult scenario would need substantial evidence of a sizable untapped or emerging market. Yet that market cannot be demonstrated until the infrastructure and capabilities have been provided. Hence we have a chicken and egg scenario that needs resolution.

From some quarters, the ODN and EOP projects have been identified as mechanisms for breaking this impasse. That is, EOP and ODN have funding which may allow them to build or lease equipment and infrastructure to allow a "proof of concept" that there is sufficient demand for advanced services to justify greater infrastructure investment by carriers. However, the scale of funding provided to these projects severely limits the amount of infrastructure they can provide for such a test. In addition, these projects are sandwiched by the perception that they exist to deliver the access to phone services that Telstra cannot or will not provide under the USO, and the more radical concept that their role is to experiment and trial new communications services that bureaucracies and service delivery agencies will take up because of their efficiencies. That is, there is a tension between RTIF funds simply being used to address unmet USO obligations on the one hand, and on the other hand providing a more adventurous test bed for the practical administrative potential of advanced communications, the potential demand from government (primarily) for these services and consequently the market specification needed for carriers to build more infrastructure in these remote regions.

5.0 Technological Utopianism

New communications technologies can deliver new efficiencies in old services as well as completely new services. And we have an in-built belief that these possibilities will inevitably benefit everyone equally. Unfortunately, the history of technological innovation and innovation diffusion do not support this assertion. In the 1960s, the so-called "green revolution" of new hybrid crops was meant to end the famines of the third world by producing record yields from more abundant hybrid species that were resistant to pests and disease. It was believed that the benefits of such innovations would inevitably "trickle down" to the poorest and least powerful members of society.

Unfortunately, the outcomes were much more complex and certainly quite unexpected. These new crops did indeed produce record yields, but only the wealthier farmers could afford the fertilisers and tractors the hybrid seeds needed. And having produced huge harvests, these farmers could make substantial profits- even from a market glut. However, with their historical yields, the poorer farmers without the technology could not survive lower prices and were quickly bought out by the wealthier farmers. The nett effect in some countries was a migration of displaced farmers joining the population of urban poor and a class of wealthy and increasingly powerful landed aristocracy.

Indeed, the potential for "early adopters" of new technologies to benefit is a well recognised phenomenon- as well as the tendency for early adopters to already be in financially and socially advantaged positions in the first place. The relevance of this to communications capabilities in remote Aboriginal communities appears somewhat partial. To begin with, it is difficult to identify who the early adopters really are or will be. Are they government agencies, or individual communities or key people within communities, or even certain carriers who made an early commitment? Will certain communities with certain communications success stories be flooded with additional, ancillary funding, while others receive little additional funding or even experience funding cuts? In short, there is a lot of potential empire building to consider, and the notion that these empires will inevitably have the interests of the "lowliest" member of society at heart may be a little naïve.

Secondly, although technologies can certainly redress some of the disadvantages evidenced amongst remote Aboriginal populations, there are many dimensions to this disadvantage and a purely technological approach can be used as a vehicle for ignoring them. For example, a great deal of ill-health amongst Aboriginal people is a function of poor nutrition (amongst a host of other factors). Menzies School of Health Research for example has shown that most malnourished babies in the womb have damaged nephrons (the filter units in the kidney) and these babies are highly predisposed to developing renal disease in later life- and as already mentioned, certain communities in the NT have the highest rate of renal failure on the planet. The average dialysis patient in Australia costs about $100,000 per annum in treatment and generally dies within 5 years. While it would appear that addressing malnutrition is a simple and solvable problem, the social factors determining malnutrition in Aboriginal mothers are many and complex. They include, unemployment and very low income levels, non-nutritious foods provided by community stores (at outrageous prices), the effects of gambling and alcohol on family incomes (although in many instances, large card games are an important socialising component in communities) and gender roles that limit women's authority. In addition, simple interventions such as "institutionalised" feeding programs of people- especially pregnant women- would possibly attract significant criticisms from a number of quarters.

In short, many problems in these communities are an expression of highly interlocked social, cultural and economic realities that are not amenable to change in the short or medium term. Therefore, although new technologies do indeed have an important role in providing better and different forms of services and opportunities, it would be naïve to expect them to bring about massive improvements. Essentially, we should not substitute technofixes as a band aid for deep, complex problems, but nor should we deny the opportunity to work with these communities in new and potentially better ways, or deny them the opportunity be part of the new literacy and economy sweeping the world.