

## **THE TANAMI NETWORK: PLACING THE TECHNOLOGY IN THE HANDS OF THE REMOTE CENTRAL AUSTRALIAN DESERT COMMUNITIES**

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Since its inception in 1992 Tanami Network (a seven site Aboriginal-owned videoconferencing network) has focussed its operations on the need to improve service delivery over a broad range areas, including Education, Health, the Law and Communications, to the four remote Central Australian communities which established the Network.

The major challenge faced by Tanami Network has been to introduce telecommunication solutions to problems traditionally solved by increasing access through long distance travel or through very expensive staff and office relocations.

Our communities straddle the Tanami Desert region of the south western Northern Territory covering an area of some half million square kilometres. Because of the substandard road system, and the extremely hot, dry, and dusty conditions. (a particularly technology unfriendly environment), it has not been the ideal situation for maintaining and developing telecommunications-based services.

Use of technologies, in our case high speed digital narrow band videoconferencing (using both satellite and ISDN), was a solution which time and economies would have eventually aroused the interest of service providers to remote communities, especially governments. However, the needs of these remote populations were both immediate and becoming increasingly desperate.

With ever diminishing government funds available, and some of the worst health and education standards in the western world, the possibility of overcoming these profound problems seemed to be disappearing rather than improving. Life expectancy for males in the Central Australian region is below 40 years and for females is below 50. Both are more than 30 years less than for the general Australian population. Access to mainstream education rarely goes beyond primary level, and health services are delivered by nursing, rather than medical staff.

The initial address, after the trial and purchase of equipment, was to education services especially at secondary and tertiary level. No aboriginal communities in the NT have access to comprehensive secondary education with the standard being a couple of years of post-primary followed by boarding school in Alice Springs or Darwin (literally a thousands of kilometres away). Boys usually have completed formal schooling at 12 to 13 years; girls by 14 to 15.

Providing access to secondary education only through boarding school, has serious cultural and social consequences for traditional societies, because of the absence of young male population during the first years after initiation and introduction to their cultural responsibilities. Similarly for young females; the loss of parental support and guidance during puberty can have long-lasting detrimental effects. Many parents despair of making the impossible choice between a decent European education and dealing with the difficulty caused by children being absent in the very years they would be learning their position in the community and their roles in ceremony and cultural life.

Further to this, very little is provided in the way of adult education. With the poor access to secondary education community members are then extremely disadvantaged in their ability to cope with the rudimentary English literacy needed to complete vocational coursework. This in turn results in poor access to the better paid

community employment positions, which are often filled by Europeans, and often leads to the spiral of substance abuse and depression found in the under-employed in most countries.

For these reasons Tanami Network negotiated with the Federal Department of Education (DEETYA) for three year trial of mixed mode education delivery through the Secondary Correspondence School in Darwin under the former Labor governments Aboriginal Education Policy. This model involved a Darwin based teacher, community-based students and tutors on-site to assist students with assignments and to ensure follow-up. It is worth noting that the alternative for the NT Education system would be the construction of a teacher's house, a classroom and recruitment of staff from interstate. As there is an ongoing shortage of trained teachers in the Territory. the cost would approach half a million dollars.

This trial resulted in access to Year 9 and Year 10 Mathematics and Science classes being provided in Yuendumu and Kintore for the first time, and in reality added two years to the schooling available in the remote NT. Although extremely significant, and successful from a community perspective, and despite positive feedback from school staff, the trial ended when triennial Commonwealth funding expired. The NT Education Dept then refocussed on its own priority areas including the "electronic classroom" which requires much higher level English and computer literacy to allow skills development to commence.

The battle to make inroads into the Tertiary Education sector has been even more fraught with difficulties. Despite numerous encouraging discussions with Batchelor College (the major remote area tertiary education provider to aboriginal communities in northern Australia), the small number of potential sites for delivery has made the college unwilling to devote diminishing resources to the development of protocols for incorporating videoconferencing into their course delivery.

The current mode of delivery of Adult Education is based on students being flown to Alice Springs, and often Darwin, accommodated for one or two weeks at these urban campuses while completing blocks of study similar to those undertaken in apprenticeships. This structure is more a reflection of DEETYA funding for accommodation and travel being more available than other areas of education support.

From the community perspective this associates vocational training with the following disruptions for the community itself, the students and their families:

Initially, students (often the family breadwinner) are absent from their dependants for considerable periods. Secondly, poor attendance often results from taking students from predominantly "dry"(alcohol-free) communities to study in towns with large numbers of alcohol outlets.

Thirdly, jealousies arise as spouses question their partners' amorous involvement with other students and contact is often made with students from other communities who would traditionally have been avoided. Finally, poor understanding and communication exists between teaching staff at the college and the work supervisors in the students' home communities, leading to diminished effectiveness of the training provided. Students are rarely able to maximise practice of the skills acquired when they return to their busy and stressful workplaces. It is common for Aboriginal Health Workers to spend 8 to 10 years completing a three year course, and being denied access to progression to the award and conditions available to qualified staff. Many because of poor literacy spend years reaching Year One.

Other discussions have taken place with the Central Australian Rural Health Training Unit and the Territory Health Service, centred on in-servicing of Nursing/Medical staff, and have been quite productive. A major contributing factor to the high staff turnover in remote communities is the poor access to personal and career development opportunities. Tanami Network has been able to provide sites for the reception of lectures and broadcasts from NSW and Qld medical information organisations and free access to the service for staff working in the Central desert area.

In the broader diagnostic area Tanami Network sponsored an intensive two week telemedicine trial between Queen Elizabeth II Hospital in Adelaide and the Pintubi Homelands Health Service, at Kintore, 530 km west of Alice Springs. This enabled remote community medical staff to discuss the relevance and effectiveness of establishing health protocols with a major teaching hospital across 43 specialty areas.

Again, despite the positive response to the trial these links lasted as long as the funding provided by the Health Commission of South Australia. At the same time hospital to hospital trails carried out by the THS centred on gaining access to specialist medical services for Darwin and Alice Springs hospitals and the priorities of remote clinics are unlikely to be addressed in the near future.

One positive spin-off from the Telemedicine trial was a series of meetings with Yuendumu clinic staff and a diabetes specialist from QEH. These involved information sessions on diabetes management, but evolved to include discussions with store managers and eventually the development of a “healthy stores policy”. Advisory stickers were printed in Adelaide and tapes and teaching materials made available to both clinic and store staff.

Similar contacts resulted in the provision of teaching materials from the South Australia Health Commission’s Substance Abuse Program to people running a program for petrol sniffers at Yuendumu and its outstations. As the NT government has no programs for petrol sniffing, and so no appropriate teaching materials, this allowed the local program managers a higher level of background information on the medical consequences of this alarmingly prevalent condition.

Perhaps this offers a view of a possible future scenario where health services are provided from Adelaide, secondary education from Perth and tertiary education from Melbourne. This reality is not so distant from our current situation. It is this area of empowerment of traditional communities through access to technology that has driven Tanami Network throughout its development. The essential element, often missing from technology-based solutions, which has been a strength for Tanami Network, is that in this case the end-users actually own and control the technology. They have been able to seek solutions to their own problems, on their own terms rather than wait for them to be imposed by government.

Other significant advances made by the network have included:

- . A prison links program – linking the four member communities to Alice Springs and Darwin Correctional Centres on a weekly basis (Lajamanu community is 1800 km return trip to either of these centres). Often the oldest and youngest members of the communities find it impossible to travel the vast distances to these centres.

- . Ceremonial links – allowing the senior “business” men and women to negotiate and plan the annual cultural ceremonies.

- . Cultural contacts – which have allowed the Warlpiri and Pintubi of Central Australia to make contact with the Saami of Finland, the Little Red River Cree Nation of Alberta and other indigenous groups around the world.

- . Presentation to national and international forums – have allowed Central Australian groups to perform dances and ceremonies for the Twenty Years of Land Rights Conference in Canberra, to the Festival of the Dreaming in Sydney and to other major international cultural and artistic events.

- . Links to government service providers – allowing community councils to speak directly to ATSIC and DEETYA regional management rather than just to field-officers.

- . Provision of mainstream government services – for example the provision of case management services for DEETYA allowed remote communities their first access to employment assistance.

- . Major commercial operations include:

- . connecting the courts with coroners, expert witnesses and interstate informants.
- . intra-Departmental communication for NT and Commonwealth Governments.
- . recruitment and interviewing staff for remote communities.
- . coordinating the sale of paintings and artefacts from the Warlukurlangu Art Centre (Yuendumu) to Paris, Los Angeles and London.

Finally Tanami Network has become involved in the production of a CD-Rom (Yanardilyi – Cockatoo Creek). This is an educational tool describing the connection between art, country, culture and community. We hope this will be widely used by museums, schools and galleries to create a broader perspective on Central Desert Aboriginal dot painting and the culture and community from which they arise.

## **The future: The Outback Digital Network**

Perhaps the greatest opportunity presented to Tanami Network to achieve full commercial viability has been the Regional Telecommunications Infrastructure Fund established in 1997 by the Federal Department of Communication and the Arts. This is a \$250 million fund created from the partial sale of Telstra (Australia's national telephone and telecommunications carrier).

A submission in November 1997, resulted in Tanami Network being granted seeding funds to assist Aboriginal organisations in the Kimberleys and Pilbara regions of Western Australia, the TopEnd of the Northern Territory, the Pitjantjatjara people of northern South Australia and the Gulf of Carpentaria and Cape York regions of Queensland, to develop similar autonomous regional telecommunications organisations.

This organisation has been named "The Outback Digital Network". Its object will be to provide satellite based telecommunications infrastructure including videoconferencing and PC based videoconferencing and expanding also into telephony, electronic banking, telemedicine, radio broadcasting and internet / email services.

This will allow a critical mass of service sites to develop with up to 120 remote communities expressing their interest in following the Tanami model. Our aim is that these networks, although autonomous, will be interconnectable and run as indigenous owned commercial operations. Already the TAFE system in Queensland, which uses video conferencing as part of its mixed mode delivery, has expressed interest in taking advantage of these new remote sites. Similarly the WA Government telecentres will, in time, link to compatible community sites.

Clearly, this development will cause service providers to more seriously consider the opportunities and cost savings available to them in provision of services to remote Australia. The development of protocols for service delivery will provide a new industry for Australia in the telecommunications field and, as the cost of satellite based services and infrastructure diminishes, these opportunities will proliferate. Tanami Network is an example of the application of technology, and any technology is only as good as its application.

To follow a theme of Dato Raj Dhanarajan's address at a distance education conference in Perth last year, there are two billion people worldwide (including a considerable number in "remote" Australia) who are still awaiting access to education. There are others, such as in "small town Australia", who are losing their schools, banks and government services. While technology cannot solve these problems alone, it can offer an increasingly cost-effective means of augmenting all our efforts in an era of diminishing education funding, "user-pays" policies and government cut-backs.