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## **Submission on Discussion Paper "Towards a Digital Strategy for the NT"**

### **Executive Summary**

This paper discusses certain aspects of the development of the NT into a digital powerhouse. My proposition is:

- The Government to sponsor and finance development of the home computer user sector (computer being broadly defined as PC-mobile device), in its choice of Darwin-Alice Springs (excluding smaller towns and communities) or Territory-wide;
- This sponsorship/support to have be in conjunction with the private sector, with the dual aims of encouraging people to become entrepreneurs/supporting young entrepreneurs.

In a nutshell, I suggest: financing the development of home users will enable, encourage and finance digital entrepreneurship.

### **Introduction**

I hold degrees in psychology (honours) and sociology, and am trained in adult education. I have been using computers for over 50 years, as power user, programmer, systems analysis, workplace IT trainer. I have also long experience (over 50 years) in entrepreneurship, as practitioner, academic researcher, and consultant.

For the past fifteen years, I have been office bearer in the Darwin Seniors Computer Club (including six years as its President). Under my leadership, the club pioneered beginners' computer training for seniors in the Northern Territory, undertook research into the digital divide faced by older people ('Bridging the Digital Divide', 2010 and 2012), and developed a program of on-going computer training for novice-to-experienced senior computer users. This last program, based on academic research into adult and aged education, has been running for over ten years.

This submission is based in part on my experience in running this program; in part on the feedback from the public with this program, and in part on my observations of other computer-training programs being run around Australia. All opinions are my own.

### **1. Objectives**

The Discussion Paper names six objectives:

1. Help local businesses to thrive and create more jobs
2. Strengthen government delivery of better services in the bush
3. Support our children through their digital lives to take full advantage of emerging career opportunities
4. Create and support safe, sustainable, vibrant communities

5. Enable local ICT and digital industries to diversify and strengthen
6. Improve accountability and restore trust in government.

From this list of objectives, I deduce that the Government's objectives may be summarised as:

1. Gain for the NT a ***competitive advantage*** vis a vis other jurisdictions (e.g. other Australian and/or overseas regions) based upon technological know-how;
2. Using this desired competitive advantage, provide ***better life experiences*** (more/better jobs, and better social relationships) for its citizens, both urban and remote.

I will address these summarised objectives under the heading of Information and Communication Technology' (ICT) Training. The following comments are based on an assumption that the rate of technological change that has taken place over the past fifty years is not going to stop, and achieving the nominated objectives will largely – possibly absolutely - depend on how well on-going ICT training is provided to the Territory's citizens.

## 2. ICT Training

There are many aspects to ICT training: to whom is it to be directed; and in what varieties; and who is to deliver it; using what equipment and resources;. At present, very little is being done in the NT. The best that can be said in its favour is that the NT's competitors (other Australian and overseas regions) are for the most part equally doze.

If the NT is to become the Technological Wonder-Centre of the Universe, then everybody who can be trained in ICT skills needs to be trained – or, at very least, have that training made available to them. Broadly speaking, two distinct groups of people need to be considered:

### 2.1 'Workers'

This is actually many distinct groups, but I lump them together for the convenience of my argument. Most if not necessarily all of the people concerned regard themselves as having a 'home life' and an 'away life', each with its own distinct needs (or lack thereof) for ICT skills. In their 'away' or 'work' lives, as either students, employees, or both, they are required by circumstances to undertake whatever ICT training their school or employer requires for them. Generally, they will have been screened for their ability to receive the needed training when applying for their 'away' position, and their motivation to accept the proffered training is provided either by a specific desire to learn ICT skills and/or by a desire to keep their place in their school or employer organisation.

- Students – primary, secondary and tertiary (Students at special schools may not be required to undertake ICT training);
- ICT Technical Professionals - programmers, technicians, etc)
- ICT User Support Professionals – e.g. Trainers, 'help desk' staff;
- Employed Advanced-Software Users – that is, people who use specific advanced types of software programs (e.g. Accounting or engineering software) in their current employment;
- Employed Basic-Software Users – people whose workplace ICT usage is limited either to low-skill software such as point-of-sale software or simple mobile phone apps.
- Employed people not required to use ICT skills at all in their jobs.

So far as I can tell, members of these all of these sub-groups are reasonably well served so far as their 'away life' is concerned., CDU provides many options, and various private organisations, both locally and on-line, fill many gaps. Other jurisdictions have access to comparable institutions, and I

doubt that improving the quality or availability of training for these people will deliver the NT any major competitive advantage.

It might be noted that much ICT training for these people is informal, in the sense that it is either provided informally by fellow students or workmates, picked up through Google searches, or learned by trial and error.

A key attribute of the ICT skills mastered by 'workers' is that it is determined by the needs of the school or workplace, without regard to any possible benefit to the workers' private lives. Thus, for example, many people who considered themselves ICT wizards at work enter retirement as either novices or, sometimes, even ICT-illiterate! This also means that people who think that they are masters of technology based on their workplace knowledge are actually very poorly placed to advise people

## 2.2 Home Users

This group – once again consisting of many sub-groups – represent people who use – or could use – ICT skills in their non-student, non-work lives.

- Employed non-ICT users – that is, people who are not required to use ICT skills as part of their job;
- Job Seekers – people who are looking for work. These people fall into three major categories:
  1. ICT-irrelevant: those seeking work in industries where ICT skills are either unneeded or very quickly taught;
  2. ICT-ready: those with marketable ICT skills relative to available jobs. In most cases, these people will either be newly unemployed (and thus have had no opportunity to fall behind technological changes), or will be in danger of sliding into the third category;
  3. ICT-challenged: those with insufficient or out-of-date ICT skills, or who lack abilities to master ICT-skills.
- Some Employers and Self-employed People: some businesses make large profits, and their owners can afford whatever training they want – even staying in luxury hotels at romantic locations to receive it. Others, including many both in Darwin and remote locations, lack either the time or money or both to get the training they need. ATO figures suggest that this group may represent as much as 50% of their sector. Furthermore, self-employed people often lack access to co-workers to help them with ICT problems;
- Non-employed/Retired – people unwilling or not needing to work, including the very young, people with certain disabilities, some seniors, and the aged.

A key feature of ICT training for home users is that it often has absolutely no relation to that required for students or workers. In schools and the workplace, computers are usually looked after by the IT Department, which specifies what operating system is to be used, what software is to be installed, and what happens if the machine breaks down. Home users, by contrast, have to be their own IT Departments – which can require training normally only available to ICT professionals.

Even simple tasks may involve completely different skill sets at home and in the workplace. A worker typically arrives at work to find a PC or other device sitting ready for use – or else is told exactly what to go and buy. The home user has to figure out what is needed all by themselves, and then go to buy it from a store whose sales people, though probably very well-meaning, do not always give good advice. Then they have to figure out how to set it up and use it, which includes

deciding which of the pre-installed software should be used and which removed (both tasks presenting problems in their own right). And all the time, software companies are pushing for use of expensive industry-grade software such as Microsoft Office or Adobe Photoshop instead of cheaper home-grade software alternatives.

And every time a home user masters a particular skill, there is at present an excellent chance that it will quickly become obsolescent!

From an traditional economic point of view, home users are largely irrelevant other than as consumers of economically useless electronic trinkets and as possible future employees. Accordingly, they have been traditionally all but totally ignored so far as ICT training is concerned. Over the past decade, for instance, Government and Industry have made a few sporadic attempts to provide one-off 'beginners' training for seniors, for people with disabilities, and for people in a few lucky remote communities – but little or nothing of an on-going nature to help people stay abreast of the ever-changing ICT scene. That has had to manage itself, by osmosis, as it were – by the keen, the socially ambitious, and those seeking novelty, for themselves. Like almost every other region in the world, both Government and Industry have been happy to leave home users to look after themselves – and then wondered why they didn't gain any advantage from their inaction.

### **3. The Importance of Home Users**

Home users are the basis of the prosperity of the digital economy. Most of successful tech companies – Amazon, Apple, Facebook, Google, to mention but a few – make their money either by selling directly to home users, or providing services to home users. Although the corporate market for tech products is huge, ultimately, almost everything is underpinned by the needs of the home user market. So what does this mean for the NT?

Back in the mid-1990s, when the Internet was just getting up to speed, I was searching online for some software, when I stumbled across a Finnish website. As we now know, many small countries such as Finland, Estonia and Belarus have achieved most notable success as mini-Silicon Valleys – but then, that was in the future. What I discovered at the time was a software forum – written entirely in fluent English! - filled with fascinating information, and run by a mysterious god-like genius of awesome powers and revered reputation, apparently built up over many years – who, as I eventually discovered, was all of ten years old!

How does the NT Government create such geniuses? Does it even bother to try? Or does it wait until somebody does something immensely clever, and then photo-bomb itself into their glory with a token award-night or two. Or does it try something radical and actually do something potentially useful, such as demonstrating the art of genius itself?

The art of genius, I suggest here, is, firstly, in assuming that everybody in the Territory, from tiny baby to aged person, is a potential genius, and then, secondly, further assuming that each of them is in need of education, encouragement and maybe a little practical help for them to be able to reach their full potential; and third and finally, observing with clinical detachment the successes and failures of one's efforts, and making the necessary adjustments. It is by such genius that the computer industry was first created; that it grew, and that it was harnessed by individual regions such as California, Finland, Estonia etc..

Acting on the assumption that NT home users are all geniuses in need of fostering will have three potential consequences: apart from the obvious fact that it will tie bureaucrats into knots trying to reconcile this assumption with the everyday evidence that some of them are as thick as a bloated boab tree, it may:

- build the home ICT market, with benefit to local businesses servicing it;
- help expand the range of people who can access Government services online, with potential

benefit to Government costs;

- increase the pool of people who may either become entrepreneurs themselves, or spark off ideas on which entrepreneurs can act.

I do not have an exact formula for managing this proposed transformation from accentuating the genius instead of the stupid, because it has never been tried before in the NT, or, more precisely, not with regard to the ICT sector. Instead, I will offer some guidelines.

#### 4. Finding the Genius in Home Users

There are a number of realities of life that must at all times be born in mind if the NT is to more than an ICT irrelevance:

- The professional-level sector must be fostered. An infrastructure of well-trained programmers, technicians, and support people (such as help-desk and ICT trainers) is essential, most especially including technicians and support services in the many remote communities of the Territory. Obviously, any 'genius' program in the Bush will depend on this infrastructure – which, however, will struggle to survive without a decent-sized home user market. Effectively, the digital economy is an eco-system which depends for its prosperity on viable-sized home user markets;
- There are no ABS statistics available on home users relevant to this project, other than those concerning Internet coverage. Other than that they tell us how many people of which demographic might possibly be a home user – which ends up being either everybody or nobody - available statistics are so ambivalent as to be all but worthless. About the only safe bet is to say that everybody in the NT is at some time or another a home user, except for that indeterminable number of people who don't want to be, or who, for one reason or another, can't be;
- Home users do not want – and will resist being – coerced into action. Persuasion by penalty will fail. Even if Government threatened to e.g. put recalcitrant home users before a firing squad, this may force token compliance, but not anything useful entrepreneurially.
- Home users are highly responsive to persuasion by reward – but everybody has their own idiosyncratic idea of the perfect reward. Other than the absolutely basic skills of ICT, there is no commonality. Some in the home-ICT service industry speak of 'the killer app': the app or software program that each home user 'would kill for'. The challenge is to find a way of offering access to that killer app as a motivational tool;
- Home users' motto is "Its inconvenient". Some work in the day, and cannot attend training then; others cannot travel at night, and so insist that training be in the day. And everybody agrees that whatever day is chosen for training is the one day of the week they cannot possibly attend. The only thing that is never inconvenient is learning about their personal killer app;
- Home users are hard to train. Just like ordinary people, they have a poor attention span, and their minds tend to wander the further the topic seems to wander from their personal killer app. What makes them different from ordinary people is that, without a parent or boss to crack the whip, they won't even *pretend* to pay attention. Trainers actually have to *be* effective to appear effective;
- Cost is also an issue for home users. Other than for the more affluent, or for work-at-home

people whose equipment pays for itself, ICT is generally seen as either a discretionary or unaffordable luxury. The major cost obstacle is Internet access, which, since the advent of the NBN, has become too costly for many. (before the NBN, Internet was available for \$10/month; since, partly because of the NBN, partly due to other factors, the cost has gone up to \$30-40/month.) Other cost obstacles are costs of buying equipment (complicating factor being the difficulty in getting good advice on what will prove ideal for each user – translation: system analysts are not trained in advising home users), costs of training (free or low cost home-user training being all but unobtainable in the NT), costs of travel and accommodation for out-of-town home users (the Berrimah Line is alive and well), and costs of servicing equipment;

- Allowing for the fact that even ITC professionals sometimes have a home life in which they do different things from when they are at work, just about everybody in the NT is, or might be (subject only to mental or physical disabilities) a home user;
- To set up a Government organisation that provides all necessary ICT training, support and services to its entire population would be absurdly expensive; it would probably also be impossible, given that the numbers of workers needed may well exceed the NT population. The alternative is to rely on volunteers and semi-volunteers (partly paid, partly volunteer);
- Volunteers are very willing to serve, provided only that they are suitably managed, which means, of course, suitably organised, supervised, equipped, motivated and rewarded;
- Some jobs simply cannot be left to volunteers, namely, those jobs that simply have to be done, even if nobody wants to do them;
- This will be an entrepreneurial project, in which good investment made carefully will bring greater rewards than doing nothing. Murphy's Law rules, however: Whatever plan is adopted *will* fail and will thus need revision.

Taking these points into consideration, I suggest:

1. The Government to set up a unit to plan and coordinate home user training and support ('Government Home User Unit' or GHUU). At the same time, a corresponding unit at CDU should be set up to undertake research into home user requirements and training/service needs, and to provide reality-based advice to the Government unit and to the Minister;
2. GHUU to encourage and facilitate the setting up of local Home User Groups ('HUGs'), which will become the vehicle for supporting home users. HUGs could be commercial operations, community groups operating under the Associations Act, or they could be incorporated community groups operating directly under GHUU's control. I would envisage perhaps all three models could be used, depending on local circumstances. HUGs would be responsible for providing services either to all home users, or to certain home user groups (e.g. the young, the unemployed, the aged, etc). (Note: HUGs might reasonably be required, according to local circumstances, not offer industry-specific training such as Microsoft Office training in competition with existing suppliers. As indicated above, such training is irrelevant to many home users);
3. Financing of HUGs: home users would be offered vouchers which they could exchange with HUGs in return for certain training and/or support services, as discussed below. Different types of vouchers would be offered for different kinds of services. HUGs would redeem the vouchers from GHUU for money or services or access to Government resources (such as rooms in schools or libraries). Money would be used (plus donations if any) to pay for HUG overheads and/or staff costs;
4. Who should receive vouchers? I suggest that *everybody* be given vouchers, but that

safeguards be put in place to make sure that people who redeem a voucher actually stay for the duration of the service or training. An app could perhaps be created for this. The point is: anyone who attends will be giving support to the HUG. Whether they happen to be a learner or a teacher is unimportant; the aim is to create interchange and communication between people;

5. HUG support: GHUU would offer a wide range of support for HUGs, including service design, publicity, managing bookings and suchlike. These services would be paid for through the voucher system. GHUU would also promote HUG formation, provide mentoring services and training for HUG officers and service providers. Its aim would be to let a thousand HUG flowers bloom, and let the vouchers sort out the winners from the losers;
6. In due course, GHUU would encourage the formation of regional and/or Territory wide HUGs, to encourage cross-fertilisation of ideas. Overseas experience suggests that the key to creation of centres of digital excellence such as Silicon Valley is the opportunity to meet like-minded people (whether they be ICT pros or home users); the more people can meet, the better. This is also an important issue in encouraging entrepreneurship. Critically important for the NT is for Government to avoid being dazzled by the glitz and glam of the over-achiever brigade; most entrepreneurship – probably around 99% of entrepreneurship – is most unglamorous, involving micro and small businesses of quite marginal profitability. One well-known aspect of this are the businesses based on micro-loans, often operated on a communal basis. In much of the NT, it is these classes of businesses that offer the best – sometimes the only – hope of dramatically improving a region's prospects. Given the deep interconnectedness between business and the Internet, the border between home user and entrepreneur can be very blurred indeed.

## 5. Services for Geniuses

There are five basic sets of services that home users request:

1. 'Beginners' Training': how to turn on your PC, mobile phone or whatever else you use ('computer'); how to navigate its User Interface (UI), and how to use at least a few of its basic software programs (apps);
2. 'Sysad Training': how to manage your computer and keep it safe; what you need to know about evolving technologies; and how to plan for your computer's failure, retirement and replacement;
3. 'App training': how to use/get best use of some particular app (e.g. Adobe Photoshop or Paint.Net);
4. 'Skills training': how to perform some particular task (e.g. send an email, perform basic photo editing)
5. User support: help when serious problems arise that require professional-level skill, as for instance, when your computer blows up, or the operating system refuses to operate.

Over the years, my Club has experimented with all of these. Our conclusion has been that all have a place in the armoury for encouraging home users, but that one other program is also needed, one that I will call 'support and learn' (S&L) groups. First, I will discuss the two programs which I suggest become the backbone of the HUG operations ('beginners' and 'S&L'), and then I will discuss the others.

### 5.1 Beginners' Training

This is the cornerstone of home users' ICT training. When my Club (Darwin Seniors Computer

Club) first started this in 2014 in Nightcliff, we were the only people offering it in the NT. We provided training for CDU students who were expected to know how to use a computer before enrolment, so that they could learn how to use this or that fancy software. We taught unemployed people who couldn't get a job because they did not know how to use a computer to prepare their resume, or to apply for jobs online. We taught seniors and people with disabilities how to use computers so that they could fill in Government forms online. We taught retiring public servants (including at least two IT managers) whose skills had become so out of date that they could no longer count themselves as computer literate. And we provided computer training to management and workers on remote cattle stations.

A particular issue we encountered during our time as beginners' trainers was dealing with low confidence. Many people who came to us were deeply lacking in confidence about their ability to master computer skills (sometimes with good reason – not all people are Einsteins; many have frantically busy lives that leave no time for practice; some have major language barriers). If the NT is to significantly improve ICT skills, then beginners' training has to function as a grass-roots activity. The formally designated teacher can only do so much; take the student only so far. If the learning is to be successful (by rule of thumb, I set the benchmark at 'can use a computer unaided 12 months later'), then low-confidence people *have* to have community support of one kind or another, and of both a practical ('will patiently remind them of what they have learned') and moral ('will patiently remind them of why they want to learn') kind.

All of this was done with volunteer labour, and some private Government grants. Eventually, the Federal Government stepped in, and, with financial help from Telstra, took over beginners' training for a year... and we left them to it. After that, beginners' training sort of fell down a hole. Last time I looked, in the Top End, beginners training is available through a single Club volunteer who operates out of Spillet House; Palmerston City Library, and Taminmin College Library. Long waiting lists are, I am told, the norm.

There are three basic methods of instructions:

- Books: good for people with better than average motivation, confidence and intelligence; unsuitable for everyone else;
- One-on-one: good for people with poor motivation, or poor confidence, or poor intelligence – or in locations where there are few students. This method requires a skilful teacher, otherwise lessons degenerate into 'I'll do it for you' sessions, with little or no learning.
- Classroom: good for people with average motivation, confidence and intelligence. A key element of success is that lessons be no longer than 90-120 minutes per day (although extra time for practice is OK), with many short breaks, with a significant break (15-30 minutes) break in the middle for socialising. The break is necessary in home user classes because (a) learning is high-energy work (i.e. the brain uses a lot of energy while learning) and students need rest time to get best benefit; (b) the socialising provides motivation for some students, either because socialising is pleasurable and/or because of the reinforcement of the importance of learning gained from the other students; and (c) the break gives opportunities for 'instant' practice time to others; and (d) it provides opportunities for entrepreneurial idea formation;

Classroom requirements: as for a school: community information about class times (publicity); a classroom, somebody to book in students, a teacher; and a computer for the teacher and all students, preferably with a large display so that students can see what the teacher is doing.

There is also the potential for on-line instruction. It would require dedicated classrooms in remote locations, with one or more teachers in a distant location (e.g. Darwin or Alice). With suitable



equipment, planning and a local 'class leader', I imagine that classes for up to ten beginners at a time could be managed.

To be successful, ICT training requires the following attributes from its students:

- Motivation: they need to believe that ICT training will be personally beneficial to them. This belief is gained in significant part from their friends, family, elders and media. Above all, the support of their 'significant others' is needed. For this reason, for most people, classroom teaching is often better than one-on-one;
- Practice time: home work is essential. Many students will not, or cannot practice. I ignore those who *will not* – for them, training is rarely if ever successful, in the sense that within 12 months they will have abandoned computer use. The others have many excuses, which generally boil down to: “I have no computer on which to practice”. ABS figures claim that most people – the overwhelming majority – have access to a computer at home, mostly with Internet connected. The reports we receive claim the exact opposite. IF nobody else in the house wants the computer, and IF it happens to be working (which it often isn't), and IF the Internet happens to be working (which it often isn't), and IF I have time from cooking the dinner or fixing the car or doing any of the other jobs that other people depend on me doing, THEN I'll do some practice – provided that I don't fall asleep first. Successful beginners' training therefore requires that computers be made available for student practice.

## 5.2 Support & Learning

Once people have learned the basics of computing, then what next? In practice, people rocket off in all directions. Some use their new-found skills to get a job; others to make movies, write books, draw pictures, look up cooking recipes; or any of at least 100,000 other activities. And some just play patience. Whatever. They are home uses, and by definition they can do whatever they want.

However... if somebody does not look after their personal computer, then soon it will stop working. Even if they do look after it, it will eventually stop working. Somebody has to pay attention – and for home users, that somebody lives in the same house as they do. We call them 'home sysad'.

To provide training for home sysads, my Club developed a program I call 'Support and Learning' (Club members generally refer to it as the 'Monthly Meeting'). S&L meetings are planned as a mix of short informational pieces, plus Q&A sessions, with an extended socialising session in the middle. Based on research into adult education, it is 'officially' structured as a two-hour meeting, consisting of five ten-minute sessions of either lecture, demonstration or Q&A, followed by a 20-minute socialising coffee-break, followed by a further five ten-minute sessions of lecture, demonstrations or Q&A. In practice, of course, things run over-time, the audience wants something different, etc etc. But that's the basic plan: short, sharp lessons on a very wide variety of topics, so that if somebody is bored to sobs one moment, very soon there is something different to wake them up. And plenty of Q&A to make sure that even the most remote topic gets covered.

One regular part of our meetings is a 'News Bulletin': about 20 minutes of news relevant to home users. The aim is to cover topics concerning the kinds of PCs, mobile devices and other digital devices used by home users in their homes, with a focus on how to buy, use, maintain and dispose of them. Also important is to take questions throughout the session. It is possible that this session could be syndicated, and run out to remote locations.

Resources: first of all, S&L meeting require a meeting room. Computers do not have to be supplied: attendees (no longer students; they are now equals engaged in self-help) either bring their own, or take notes. Tea/coffee facilities are essential, and must be supplied, or somebody must bring them. A PC and projector (big screen) is needed, together of course with electricity. Chairs but not necessarily tables are needed. Internet access is essential (we find that we do not always use it, but when we do, it is really valuable).

Personnel: Somebody must get the keys to unlock the premises. Somebody has to stay by the door to welcome guests. Somebody has to act as MC. And there has to be at least one, preferably more 'gurus' to present lessons and to help deal with difficult questions. (Gurus do not have to world-beaters; even a modest ICT knowledge plus Google goes a wonderfully long way.) Allowing for people getting sick or going on holidays, at least three people are needed. Additional gurus can be brought in as guest speakers, in person or via video link.

Attendees: we have been running our meetings for over ten years, for the past eight years at Casuarina Library. Attendance has fluctuated between 15-35 people per session over that time, with 20 being about normal. Obstacles to gaining larger numbers are partly lack of publicity (we have found it very hard to find volunteers willing to do the back-room work to maintain these meetings); partly (relatively) poor acoustics in the room which makes it hard for people to hear speakers; and partly because it is harder to get an answer to your personal question if there are too many people. We have some attendees who have been regulars since the beginning; others who come for a while then disappear, plus quite a large number who come intermittently, often only when they have a specific question. My best guess is that our attendees come from a pool of maybe 250 long-term regulars and irregulars.

I think S&L works best when it is treated as a form of 'infoentertainment' – a bit like ABC's 'Q&A' program, with plenty of information to get people thinking, combined with lots of oohs and laughs.

### 5.3 Sysad Training

Sysad (short for 'System Administrator', also Sysadmin) in this context means training in care for home computers. This includes choosing and installing software, backing up files, keeping out the viruses and ransomware, and preparing for an eventual replacement.

Available sysad training seems to fall into two varieties. The first variety leads to professional qualifications such as Cert 4 or degree. The second type, for home users, is I believe offered as an evening course at Casuarina Senior College.

My Club began offered daytime sysad course in about 2004-9, and indeed prepared a comprehensive manual for home sysads (<http://www.training-my-computer.com/home-computer-administrator.html>), now somewhat out of date.

Our experience was that very few home users will sit be motivated enough to undertake a comprehensive training program in these skills, and that those who are then want professional-level training. In the end, we folded our sysad training into of S&L sessions, which seemed to give a far better and much more cost-effective result in the long run. As it emerged, it is much cheaper to teach somebody how to research their technical issues online than to provide them with every possible answer, most of which they will never need;

### 5.4. App Training

Apps training is very much like beginners' training, except that the student can already use the computer, and needs help only with one single app (such as Microsoft Word, MYOB, Photoshop, GIMP). Like sysad training, we concluded that this did not really belong to home user training; collectively, home users want advanced training in every piece of software ever written, even some so ancient that hardly anybody knows its name. The problem is that in most cases, there is only one person wants any given piece of training. Once again, we folded app training into S&L sessions, with the aim of either teaching them how to research their problem online, or pointing them in the direction of professional trainers;

### 5.5 Skills Training

There are two aspects to skills training. The first deals with requests to “teach me how to do some specific task, such as making a full-length movie, even including telling me what kind of computer

and software I will need". The other answers the question: "I am using Microsoft Office, and I need to write a job resume. Please show me how to do it." Either way, we concluded that these kinds of requests lie outside HUG concerns, belong either to hobby groups (such as a film-makers club) or the commercial sphere;

## 5.6 User Support

This refers to home users' needs for serious technical help when they cannot help themselves – for example, when they need help choosing the right computer or software (the expertise that at the professional end of town is called systems analysis) or when the computer goes blooey. Some of this expertise can be provided through normal commercial channels – at least in the big towns; some through S&L meetings; and some online.

## 6. Remote Communities

Ignoring its more romantic dreams, the Government has a practical choice as to whether to create a region of ICT excellence within just Darwin (and, just possibly, Alice), or within the entire Territory. Choosing the 'whole of the Territory' presents some very 'interesting' challenges.

One problem is that both the technical support services just mentioned, and the ICT entrepreneurial community in general, exist in an eco-system of mutual support. Some entrepreneurs make their money online, and care not where their customers live. Others depend either on local customers, or at very least on remote customers accessing their services through purpose build access point. For example: telcos depend on NBN creating physical facilities for them in local areas; without these, they could not service their customers.

In the case of businesses servicing home users, once again, the choice is for the users to be strictly local, willing to physically travel – or to have long-distance access via some technological service point. It takes, for instance, a lot of home users to keep one technician busy, which means that technicians in very small communities – especially in ICT-impooverished communities - may struggle to make a living. Likewise, specialists in different ICT activities – such as movie-making, or website design, or using specific software such as GIMP – may also struggle. Even a large town such as Darwin is too small for some specialists, and towns such as Katherine and Tennant way too small.

One role for GHUU, I suggest, will be to work with the various communities, HUGs and specialists to bring everybody together – to give, for example, the best ICT teachers opportunities to work with home users in different locations throughout the Territory, in person or via video link. Most homes cannot manage the necessary video link, so it will need to be a communal centre. I suggest that communal video links should be set up for multi-purpose use, as training centres, lecture halls and also one-on-one consulting, and that the use of this service be regarded as an essential public service.

Finally, a small word on motivation of home users in remote communities, which includes both small towns, communities and agricultural operations. (I include the agribusinesses, because they include both family members and staff who may fairly be regarded as home users.) I think of (a) those for whom English is either a second language, or comes in a creole variety; and (b) those (regardless of their English skills) whose knowledge and experience of the larger world of cities and urban life is extremely limited. In each case, these people will have problems relating their learning of ICT skills with their ability to better their lives. For many of them, asking them to learn 'city skills' is about the equivalent of my asking you to learn Ancient Egyptian hieroglyphs to that you can swim better. If I told you that Michael Phelps had done this, then won seven Olympic medals, you might be impressed (if you believed me), but would you necessarily believe it to be personally relevant? Most people, including those in remote communities, would need more convincing.

Accordingly, I recommend, if Government is serious about the Bush, it begins a campaign of

delivering hard information about city living and city ways, to help wanna-be bush entrepreneurs plot their way forward. This information will be of use to very few Bush residents, but for those with the drive and ambition to make it happen, it will be invaluable.

According to the 1970's Henderson Report into Poverty, about 15% of Australians became 'employers' (defined as employing at least one person). I think that this can be taken as guide to people becoming entrepreneurs: most won't, but some will. The Henderson Report also noted that some people were more likely to become entrepreneurs than others, with the critical issue being whether the individuals concerned received (a) general community support; and (b) whether they received realistic – that is, not politically-correct pap or meaningless slogans – information about their target markets. By way of evidence, it provided evidence that only 4% of Aboriginals became employees, while up to 70% of post-War Jewish refugees did likewise. Are Aboriginals less clever, less ambitious than Jewish people? Given that native-born Jewish people did nowhere near as well on this measure than their refugee brethren, I rather doubt it. The essential difference, I suggest, was the help and support they received. And the detailed, highly accurate information they received. Other research into entrepreneurial success shows this to be true: entrepreneurs with no advisers have about a one-in four chance of success; those with a successful businessman as their adviser have a one in six chance, while those with a professional adviser (accountant, marketer etc) have a one in three chance, with multiple advisers increasing the chance up to 95%!

Implications are Government needs, directly or via e.g. its GHUU arm, needs to provide two distinct strands of information:

- Slogans and songs; telling the non-entrepreneurial population what they need to know to help and encourage entrepreneurs to do their thing, and how to get out of their way. The communication model in my mind is health messages: for the safe of our communal health, here's what you do/don't do.
- Search-engine friendly information: providing background information and instructions specifically targeting individual remote community entrepreneurs and wanna-be entrepreneurs. Optionally, the provision of this information could be farmed out to the commercial sector.

## **7. Conclusion**

In the case of digital economies, the unchallenged king of the heap is California with its Silicon Valley, which has an advantage to match each of our disadvantages. We cannot win head-to-head with them – nor to any of their rivals. We have to do it by creating our own unique brand of excellence.

The vision I suggest, of having a home-user based digital economy, may be seen as counter-intuitive, even possibly counter-productive. Perhaps this is simply because nobody has done it yet. Or perhaps it is because of our inbuilt sense of reverence for big things – big companies, big governments, big cattle stations, big piles of money. For most of history, the people who built big things were big people – kings, emperors, popes – and only the things they built were deemed worthwhile. Today, there are five emperors, and their names are Alphabet (Google's parent company), Amazon, Apple, Facebook and Microsoft. All have built their fortunes selling to home users. Now is time for some region to capitalise on what they have created.

Why not the NT?