



Telecommunication Affordability Issues for Deaf people Discussion Paper

This paper focuses on the cost of using telecommunication services. Are telecommunication services affordable (cheaper) for Deaf people? Are Deaf people paying a fair price for the services provided.

The 21st Century is regarded as the Information Age. The Information society provides us with a large range of telecommunications and information technology equipment. We no longer need to rely on a “plain old telephone service (POTS)”.

Multimedia telematic services and applications which can combine sound, image and text and for which all means of communication - telephone, telefax, television and computers - can be used together in a complementary way. Spread out to all levels of economic and social life these new technologies will gradually transform our society into an "Information society".

COST 219: <http://www.stakes.fi/cost219/COSB210.HTML>

Such access to these tools will allow us to:

- Access information from many sources including the internet;
- Interact with and utilise data in various ways
- Communicate while on the move regardless of where you are.

Today's world is certainly an exciting one for the Australian Deaf community. We can communicate quickly and easily as never before. We are no longer restricted to using a TTY as our only communication device. There are now other forms of communication such as mobile phones, fax machines and computers with email/internet chat programs. Some current and emerging technology is accessible to Deaf people but comes with an extra cost.

Around the world, consumers are recognising that when it comes to essential services such as telecommunications there are certain issues that need to be considered. Some of the issues they are considering are:

- accessibility
- availability
- affordability, and
- appropriateness

The above four A's are used as guidelines (benchmarks) by Governments, industry regulators and consumers to ensure that the industry meets universal requirements necessary to allow all people to enjoy their services. However, depending on how such issues are considered and measured, some benchmarks may not meet the current needs of the consumer.

As an example of current regulations that acknowledge the different telecommunication needs of Deaf people, OFTEL, the UK telecommunication regulator emphasises the importance of enabling all people the ability to afford a service. Their principles of affordability include:

- a) That competition is generally the best means to ensure efficiency and low prices;
- b) That prices of telecommunication services should reflect underlying costs;
- c) That where competition is not yet effective so that the level of costs do not reflect those of an efficient operator, licence conditions setting price controls encourage greater efficiency and reduce prices for customers;
- d) That where the general level of process achieved through the effect of competition in the market, or through intervention by the regulator, nevertheless results in particular groups of consumers who are unable to afford basic telecommunication services, or could result in unfair price disparities between different parts of the country, specific action is taken; and that technological and other developments may mean that this approach to affordability will need to be adjusted over time to reflect new and changing conditions.

www.oftel.gov.au/publications/1995_1998/pricing/rvtd1198.htm

This paper explains how Deaf Australians are paying higher or extra costs to access the range of telecommunication services available.

Telecommunications equipment and access to networks are not cheap. Many Deaf people own a mobile phone for the convenience it provides in communicating almost anywhere and at any time. Most mobile phone contract plans include a fixed amount of free voice

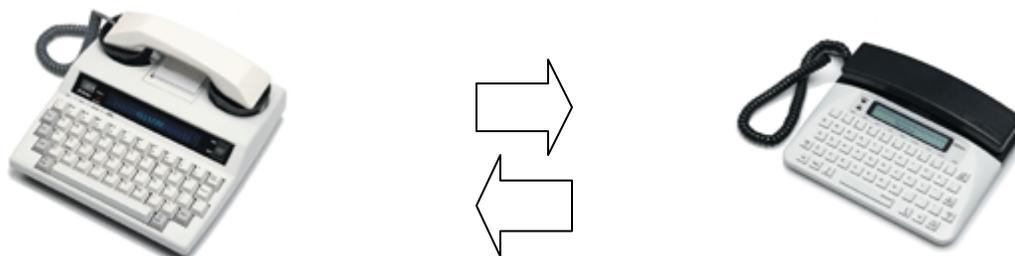
calls. Many Deaf people do not use this ‘voice calls’ service but still pay the same contract price and additionally for all SMS call costs. This is just one example of how Deaf people pay for telecommunications access without enjoying the benefits of all of the services. This creates an unfair situation for Deaf people.

Affordability issues for Deaf people cover a wide range of telecommunications services such as:

- 1) Long distance call costs
- 2) Mobile SMS message costs
- 3) Broadband access costs
- 4) Telecommunication equipment costs
- 5) Internet costs

1) LONG DISTANCE CALL COSTS

In 1993, the Australian Association of the Deaf (AAD) produced a detailed research document “*Telecommunications for Deaf people – meeting the telecommunications needs of the Australian Deaf community*”. An important finding from this research project was that there was an urgent need to establish a regulatory framework for telecommunications access and in particular to provide improved services to TTY users including ‘a call charge concession to reimburse TTY users and relay users for the extra time taken to make TTY calls’ (page 7).



According to Dunne et al “911 Emergency Communications Workshop” (TDI Convention 1993), TTY to TTY calls take 6-8 times longer than a standard voice call. As a result, what would be a short 5 minute voice call can take 30 minutes from TTY to TTY. This also depends on the typing speed of the Deaf TTY user and the knowledge of English to communicate to another person.

Since the production of the report, the Federal Government allocated funding to establish a National Relay Service (NRS) in 1995. This was a significant step towards enabling access between Deaf and hearing people and it included a 30% discount for long distance calls acknowledging the greater length of time and subsequent cost of long distance TTY calls. This was achieved with the introduction of the Personal Identification Number (PIN) system.

Over the years, the PIN number proved problematic. In June 2002, the Federal Government agreed to trial the removal of the PIN number system for six months. This

means that any deaf, hearing impaired or speech impaired person that makes a long distance call through the NRS only pays the cost of a local call regardless of how long or where they are calling.

It is ironic that the Government did not also acknowledge this for TTY users using local carrier networks to make long distance TTY to TTY calls with a subsidy scheme through the Universal Service Obligation (USO).

AAD is aware that the United Kingdom, some European countries and the United States of America provide telecommunication carrier based or government subsidised discount programs to ensure a fairer pricing scheme for direct TTY to TTY calls and TTY relay service calls. This is discussed in more detail later in this document.

According to the prime distributor of TTYs in Australia, Printacall, there are over 15,000 TTYs within the Australian community. Many of these are owned or rented by Deaf people. This represents a significant number of TTY users that would benefit from subsidised long distance call costs.

Telecommunications companies argue that since the de-regulation of their industry, there are many cheap and affordable deals around for long distance calls. Although such competition is beneficial for the consumer, it is still not beneficial to Deaf customers. We mentioned earlier that TTY to TTY calls take between 6 – 8 times longer than a comparable voice transaction. For example, a carrier may offer a flat rate of \$3.00 for a minimum of 3 hours. For Deaf people to have exactly the same conversation via TTY will take 18 hours - the cost would be significantly different.

In addition, many of these discounts are for off peak rates, there are very few deals for day time long distance call charges and these are attached to higher priced plans. If, as an example, an unemployed Deaf person lives in the Blue Mountains and needs to make a TTY call to his employment agency in Sydney which also has a TTY, the cost of the call would be expensive. Many Deaf people avoid calling services they need during the day time and/or ask a hearing person to make the call for them. Deaf people may also decide not to use a TTY to communicate but use a fax, send an email or SMS to the person instead. The major drawback here is that none of the alternative communication methods are interactive.

This situation also raises the question or theory of whether Deaf people are accepting a lesser form of communication which is not interactive such as fax and email or SMS because it is more affordable. Is that fair? The feedback from the community consultations we have been conducting illustrated that this is an unfortunate trend.

The refusal of the Federal Government to resolve this issue is denying Deaf people the independence and freedom to make interactive (real time) calls and access services equitably and fairly.



During the National Consultation conducted by the *Deaf Telecommunication Access and Networking Project (DTAN)* many people were unsure about the value of AAD lobbying for reduced costs on long distance calls. The main reasons for this appear to be the following:

- 1) Emergence of alternative telecommunication methods such as fax, internet chat. E-mail and mobiles with SMS facility.
- 2) Belief that long distance call costs will always be too expensive therefore individuals have adopted other telecommunication methods.
- 3) Internet Relay Chat is the only option that simulates a TTY conversation.

However, when participants were informed of the long distance call subsidy programs offered in the UK and the USA, there was more support for AAD's views on the need to lobby for call cost reductions. There was also a consensus that if long distance call costs were subsidized by the Federal Government or through the Universal Service Obligation, then people would probably communicate more directly via TTY.

Evidence of overseas acknowledgment by Government, telecommunication regulators or carriers that Deaf people who use text phone communication (such as TTYs) require special consideration and reduced tariff charges:-

United Kingdom

OFTEL Telecommunication (Service for Disabled persons) Regulations 2000.

2.36 Regulations implementing Article 8 of the revised Voice telephony Directive (98/10/EC) (the RVTD) became law in October 2000. Regulations inserted new conditions into the licences of fixed line operators and require operators:

To apply special tariffs to textphone users.

www.oftel.gov.uk/publications/consumer/uso0801.htm



Belgium

Telecommunication Act 1991 provides for the reduction in call charges for people who have a hearing impairment (Roe, 2001. P.171)



France

Post Office and Telecommunication Law (no. 99-162) refers to 'reduction in the cost of telecom services for disabled people' (Roe. 2001. P.171)

USA



Carriers provide a mandatory reduced discount rate for TTY customers on their bills (regardless of whether the customer's home also includes hearing people) as well as the usual varying competitive call charge rates



AAD also recognises that not all Deaf people will have access to the internet and email facilities. According to a special article produced by the Australian Bureau of Statistics currently only 18% of households with income of less than \$49,999 per annum have this access. (Information Technology and Telecommunications in Australia: Finance 1999-2000: ABS Catalogue 5611.0). This increases to 51% of households with incomes over \$50,000 per annum. Given that most Deaf people who use Auslan are employed in the Trades/Services area (Hands up NSW – A profile of the Deaf Community of NSW, 1998 pp 27) and are regarded as having incomes of less than \$49,999, we believe that less than 18% of Deaf people will have access to a computer at home and be able to use internet and email facilities.

Questions:

1. Do you have a telephone line at home?
2. Do you own or rent a TTY via the Disability Equipment Program?
3. Do you make many long distance TTY calls?
4. Are long distance call charges a problem for you?
5. Do you think long distance calls should be discounted for TTY calls?

2) *MOBILE SMS MESSAGE COSTS*

2.1 Call Charges

In recent years, mobile phones have been an attractive accessory for many Australians.



Deaf people, likewise, have been attracted to the appeal and portability of mobile phones and rapidly purchased mobiles to communicate with friends and family. In some recent anecdotal research conducted by the Australian Association of the Deaf, was found that Deaf people send and receive 10 times more SMS messages per month than the average user. The main advantage of mobiles over other telecommunications devices is that they can be used almost anywhere and at any time. However, Deaf people often need to purchase more expensive equipment to access what are for them basic services. Additionally to access this technology they are still paying for services that are not accessible on many mobile phone plans.

Traditionally, mobile phone companies have offered packages where the customer pays a monthly access fee. This fee includes the cost of the handset, fixed amount of voice calls and network access charges. Deaf people have paid for but generally not used the fixed amount of voice calls. Deaf people pay approximately \$50 - \$200 per month on access and SMS charges.

Over the last 12 months mobile phone companies have responded to the high number of SMS messages being sent worldwide and have developed packages and incentives to encourage people to use the service more widely. This has significant benefits for Deaf people especially deals which have more recently become available where monthly access charges include a fixed dollar amount that can be used for voice and SMS calls. This has helped, but has not resolved all issues of inequity.

For example, there are currently services available where people can make free (voice) mobile phone calls between the hours of 9pm – 5am. This service is not extended to SMS so again Deaf people (who rely on SMS messaging) miss out on the benefits of a service that is aimed at attracting a large customer base. Telecommunications companies need to act quickly to ensure that Deaf people are able to send SMS messages free from mobiles with the same network, as is provided to hearing people for off peak services. Failure to do so may trigger discrimination complaints under the *Disability Discrimination Act 1992*.

Some low income earners are no longer accessing a fixed line phone due to the high costs of line connection fees. Instead many of these people are purchasing pre-paid mobile phones to use to make calls and take advantage of the mobile phone free phone calls period. Again Deaf people are unable to take advantage of such a useful service.

A recent news article ‘Text boom: cut the costs, groups urge’ by Peter Ker (Sunday Age, 28 July 2002. Page 8) refers to criticism of mobile phone short message service costs. Carriers have recently increased their charges from 20 - 22c to 25c per message (160 characters). Over 80 million messages are sent on the Telstra / Optus network with Vodafone sending over 58 million each month. Vodafone estimates their earnings for mobile data calls (SMS) will increase by 25 percent in 2004-5. AAD believes that given the high volume of SMS messaging, companies can afford to lower usage charges. This will make the service far more affordable for Deaf mobile phone users.

2.2 Handsets



To purchase a mobile phone costs several hundred dollars. A mobile phone represents independence for many Deaf people and enables them to organise appointments or communicate with their employer easily and quickly. Deaf people require phones from the “top end” of the mobile phone market as these phones have features that Deaf people require to get appropriate use of the phone.



It can be argued that Deaf people should not have to pay higher costs to purchase a phone that is more expensive in order to get basic access to the mobile network. The

key features that Deaf people prefer are:

Essential features in order of priority:

- Predictive text
- Large screen
- Small, compact, lightweight
- Vibrate function
- WAP compatible (able to access text based information)

These features are normally found in the more up market versions of manufacturer handsets. The average retail price for phones with the above features is approximately \$300 to \$500 per handset if you purchase the phone outright. This cost is reduced significantly if you enter into a contract with a mobile phone company. It should be noted that not all phones are available for all of the mobile phone plans on offer. If the phone is more expensive, the customer must pay a higher monthly fee to access the network which includes either SMS messaging, voice calls or both.

When purchasing a mobile phone, Deaf people should be able to receive an accessible (higher priced) mobile phone at a price available for a standard mobile phone. We cannot use an inaccessible handset to access the mobile phone network. This principle is the same as in the *Scott vs. Telstra* case under the *Disability Discrimination Act 1992*, which allowed Deaf people to have a TTY in place of an inaccessible handset to access the standard telephone service (STS).

An example is the Nokia 9210 communicator phone. It provides a broad range of communication applications including voice, SMS, email, fax and internet. It does not have the ability to communicate with TTYs.

If this was possible, as is the case in Europe (which have V.18 technical standard installed), then the Nokia Communicator could well be a choice phone for Deaf people. This would make the phone interactive with TTYs. However despite its potential as a truly accessible mobile phone it is unlikely that , because of the high price tag of the Nokia Communicator (\$1700.00), Deaf people will purchase the phone under present market conditions. What if it was included in the Disability Equipment Program - would Deaf people choose it over the TTY?

Questions:

1. Do you have a pre-paid mobile phone?
2. How many SMS messages do you send and receive per day?
3. Do you use your mobile phone for work?
4. How much is your monthly phone bill?
5. Would you like to have free SMS call periods?

3. BROADBAND ACCESS



In recent years, broadband services have been released by telecommunications carriers. Broadband services enable visual communication over the telephone network in a variety of formats such as: videoconferencing, videophone and Video over Internet Protocol. These services have advanced and improved social, household and business outcomes with their ability to add a visual dimension to the interaction taking place.

Telecommunications and Internet companies are starting to offer Broadband services to the general community. This has tremendous potential for Deaf people to communicate with each other via the Internet in their first language – Auslan (Australian Sign Language). For sign language to be easily understood and expressed via the Internet, at its best you need a speed of 384kbps. Currently a basic telephone line (POTS) will not support such a large amount of data without significantly slowing down the speed of the picture. This will cause “stuttering” in Auslan and make it impossible to have a reliable conversation.

The only way access a broadband service that can cope with Auslan communication, which requires minimum of 128kbps and maximum of 384kbps data speed (both ways), is to install an ISDN connection. This is the only type of connection that can cope with the transmission of such a large amount of information. Broadband access has the potential to provide a wide range of services to Deaf people that include:

- Video telephony services
- Voice over internet protocol
- Video relay interpreting

Currently the cost of accessing broadband services depends on the data speed. The higher the speed required the higher the cost of access charges. In addition, the initial start up costs are very expensive which makes it very difficult for most Deaf people to access services that best meet their needs.

For Deaf people to access these applications, consideration needs to be given to making the services more affordable. Listed below are some examples of how subsidies/support is offered in other countries.

- 1) Norway 

The Norwegian Government has contracted a leading visual communications technology company to supply desktop videophones to Deaf people who are under 18 years of age. This will enable these young Deaf people to communicate via a video link using sign language.

2) Germany



The government provides subsidies to provide reduction in ISDN call charges made by Deaf people who use video communication.

3) USA



Video communication service providers provide reduced costs to Deaf people more in line with local network charges.

Questions:

1. Are you connected to broadband services? If not, why not?
2. How much could you afford to pay for Broadband services?
3. If many Deaf people had access to broadband and had a videophone, would you consider using a videophone to replace the TTY?

4. TELECOMMUNICATION EQUIPMENT COSTS

The Disability Equipment Program (DEP) provided by Telstra already provides a range of equipment for Deaf people and people with a disability. Such equipment is already provided at the normal rental rate available for all others connected to Telstra's network.

4.1 TTYs and Telstra's "InContact" program.



Currently, a person on a low income is able to access Telstra's excellent 'InContact' program which provides them with a fixed home phone line and the ability to receive phone calls. However, an 'InContact' user needs to buy their own telephone handset.

For Deaf people who are on low income and wish to use the 'InContact' program, they are not eligible to get a TTY from the DEP. Therefore they can't access such a valuable service.

Considering that a TTY costs over \$800, whereas a basic phone handset can be purchased very cheaply, is this fair?

Questions:

1. Would you classify yourself as a low income earner?
2. Are you aware of Telstra's "InContact" program?
3. Would you like to access this service?
4. Do you have a TTY from a Disability Equipment Program?

5. INTERNET COSTS



Research undertaken by the Deaf Australia Online project (DAO) in 1999 showed that Deaf people were not accessing computers and the internet in the same way as most others were. Similarly to the recent study by Women with Disabilities (2001), computer hardware, connection fees, usage costs and training expenses made it difficult for Deaf people to enjoy the multiple applications that a computer and internet can provide.

Deaf people also have the additional difficulty of accessing training opportunities because of communication difficulties (lack of sign language interpreters and / or specific requirements when teaching Deaf people).

While the government is facilitating and encouraging ways for the Australian community to embrace computer technology and the internet (eg Networking the Nation), it needs to address issues of 'digital divide' and affordability for Deaf people, pensioners and others who may be on low income. A detailed study by the National Centre for Social and Economic Modelling, University of Canberra (NATSEM 2000), also illustrated the access differences between different community sectors in Australia.

Questions:

1. Do you have access to a computer at home?
2. Do you access computers via an Internet café?
3. Have you had any training on how to connect to the Internet?
4. If you attended a training course, did you have an Auslan Interpreter?

CONCLUSION

The high cost of access to telecommunications makes it very difficult for people who are on low incomes to access these services. For Deaf people, telecommunications is one of the major services where not only is access lacking but the affordability of current services offered does not meet the needs of the Australian Deaf Community. This in turn makes it even more difficult for Deaf people to access basic services that are enjoyed by other Australians.

As Deaf person cannot hear, their major source of information currently is via text based services. Technology has improved significantly since the telephone was first introduced in the 19th Century. There is now a wide range of text based services that can be comfortably used by Deaf people. The telecommunications market however, has not

responded readily and actively to include text based services as a primary feature of telecommunications for this target group. In doing so, the affordability of the few text based services included in the primary auditory services makes it quite expensive for Deaf people to access telecommunications.

Unless fairer consideration is given for Deaf people's right to have affordable access to the telecommunications network and services, using the *Disability Discrimination Act 1992* will become an option to force the industry to make these changes.

AAD is committed to working with government, industry and other disability organisations to achieve these aims and ensure that Deaf people are able to have the same level of access that is affordable and is enjoyed by other Australians.

Comments and feedback

AAD looks forward to your comments on this paper. As you can see it addresses many issues. We may have missed some, so please tell us your ideas, concerns and thoughts.

The deadline for feedback is Friday 18th October 2002

If you wish to provide feedback or ask questions, you can do one or all of the following:-

1. Contact the DTAN Officers via email:-
Catherine Clark cathy.clark@aad.org.au
2. Visit AAD's website, check into DTAN discussion site and type your comments.
www.aad.org.au

We look forward to receiving your comments and feedback.

After receiving feedback from the community, we will share your comments with the government, telecommunications industry, mobile phone providers, community services and the other members of the Deaf community.

Phil Harper
Cathy Clark
DTAN Project

References

Bonser, P. **Hands up NSW – A profile of the Deaf Community of NSW**. Deaf Society of NSW. 1998

Clark, C & Harper, P. **Disability Equipment Program**. Australian Association of the Deaf. 2002.

Clark, C & Harper, P. **Mobile Phones and Deaf People**. Australian Association of the Deaf. 2002.

Clark, C & Harper, P. **Emerging Technologies**. Australian Association of the Deaf. 2002.

COST 219. **Information Society**. Paper.
<http://www.stakes.fi/cost219/COSB210.HTML>

Dunne, T. et al. **“911 Emergency Communications Workshop”**. Paper. TDI Convention, Alaska. TDI. 1993

Given, J. **Barriers to Telecommunications in Australia**. National Centre for Social and Economic Modelling, University of Canberra. 2000.

Ker, P. **Text Boom: cut the costs, groups urge**. Sunday Age. July 28, 2002. Page 8

Knuckey, J. & Siegers, C. **Deaf Australia Online project**. Victorian Deaf Society. 1999.

National Telecommunications Survey Women with Disabilities, Australia. 2000

Office of Telecommunications.. **Statement on the principles of Affordability**. OFTEL 1998.
http://www.oftel.gov.au/publications/1995_1998/pricing/rvtd1198.htm

Office of Telecommunications.. **Universal Service Obligation**
OFTEL 2001.
<http://www.oftel.gov.au/publications/consumer/uso0801.htm>

Roe, P. (Ed) **Bridging the Gap: Access to telecommunications for all people**. COST 219. 2001.

Roe, P. (Ed) **Telecommunications for All**. COST 219. 1995.

Wilson, I. **Telecommunications for Deaf people – meeting the telecommunications needs of the Australian Deaf community**. Australian Association of the Deaf. 1993.