Detailed Summary

1. Supplier's Compliance with the Contract and Quality of Service Delivery

The Contract

The primary legal framework for the operation of the NRS is contained in Part 3 of the *Telecommunications (Consumer Protection and Service Standards) Act 1999.* The Act defines the NRS as a service which:

> *provides persons who are deaf, or who have a hearing and/or speech impairment, with access to a standard telephone service on terms, and in circumstances, that are comparable to those on which other Australians have access to a standard telephone service; and is provided by a person under a contract with the Commonwealth (s.95 (1)).*

This definition of a standard telephone service is the basis on which the current provision of the NRS is judged[1].

In addressing the first Term of Reference, this section determines the extent to which the NRS provider has complied with its contract to provide the NRS. This assessment has been undertaken on the basis of the most recently available data—that is, to June 2002.

The information in this section is based on annual, quarterly and monthly NRS Performance Reports compiled by ACE and the Australian Communications Authority (ACA).

1. The standard telephone service is defined in section 6 the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (TCPSS), as a carriage service for voice telephony, or another equivalent form of communication that is equivalent to voice telephony (such as a TTY).

The NRS Plan

The Australian Government requires the NRS Provider to:

- Prepare the NRS Plan each year and implement all aspects of it in accordance with the Contract. The NRS Plan must include timetables for the supply of the NRS and Performance Standards to be met by the NRS Provider.
- Review the NRS Plan annually to ensure it is meeting the Australian Government's objectives.
- Provide an Australia wide NRS in accordance with the NRS Plan.

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The NRS Plan describes the scope and functionality of the NRS and outlines a set of agreed services and standards that describe how it will be delivered from July to June each year.

ACE's Compliance with the Service Performance Standards

In delivering the NRS Plan, the NRS Provider must adhere to the following five Service Standards:

i. No more than five calls per 100 into NRS will receive a busy signal, based on a quarterly average. This is known as 'call blockage'.

Meeting call blockage standards has been a problem across the contract period. ACE has only partially complied with this Service Standard in each of the four contract years to date. In each of these years, ACE incurred a penalty for quarters in which call blockage was higher than the five per cent target. Of the 16 quarters reported on, six had an average call blockage rate higher than five per cent. Three of these six quarters were December quarters, indicating ACE has particular difficulties managing demand leading up to and during the holiday period. ACE's performance on this standard since January 2001 has been less variable than the period prior to January 2001.

ii. At least 90 per cent of calls will be answered by the NRS within 10 seconds, based on a quarterly average.

ACE has consistently complied with this Service Standard, with close to 100 per cent of calls answered within the 10 second standard. This level of achievement is predominantly due to the use of an Interactive Voice Response (IVR) system, which automatically picks up incoming calls and determines their type (voice, modem, TTY etc), before, routing the call to an available operator.

iii. The level of complaints received by ACE, the Commonwealth or Telecommunications Industry Ombudsman, will be less than two per cent of the total successful calls through the NRS, based on quarterly average.

ACE has consistently complied with this Service Standard across the contract period, having a very low rate of complaints, with an average of approximately 0.2 complaints per 100 successful calls, well within the Service Standard level of two complaints per 100 calls.

iv. No more than five text emergency services calls per 1000 into the NRS will receive a busy signal, based on a quarterly average.

The text emergency number 106 was introduced in December 2000. It allows people who are deaf or have a hearing and/or speech impairment to access emergency services such as ambulance, police or fire using a text device such as a TTY or modem using the NRS. During the six months of the 2000–01 year that the service was in operation, the call blockage standard of 0.5 per cent of calls was exceeded in the June quarter. During 2001–02 ACE fully complied with this Service Standard with an average call blockage rate of 0.18 per cent.

v. **At least 99 per cent of text emergency service calls will be answered by the NRS within 10 seconds, based on a quarterly average.**

ACE has fully complied with this Service Standard since the introduction of the emergency text service. As already detailed under Service Standard (ii), the use of an IVR means that unless ACE experiences serious technical difficulties, ACE is likely to comply with this Service Standard.

Overall, ACE's compliance with the five Service Standards has generally been sound with the exception of call blockage. ACE has cited rostering and staff difficulties as the main reason for higher than acceptable call blockages rates during certain periods.

Quality of Service Delivery

Community Outreach Program

The NRS Provider is required to develop and maintain a program to promote the NRS to Relay Users, potential relay users and all Australians. The Outreach Program has the following aims:

- To increase participation in the NRS through awareness and education on use
- To better identify specific target groups and issues surrounding the participation in the NRS
- To increase general community understanding and education
- To continually improve Relay User satisfaction
- To contribute to continuing service quality

Each financial year, performance indicators for the Outreach Program are agreed upon in the NRS Plan. The effectiveness of the program is considered as part of the annual review of the Plan, and is measured in terms of outcomes arising from four key objectives.

ACE's performance in achieving the current outreach objectives can be accessed via the 'Objectives and Outcomes of Outreach Program' link on the Executive Summary page.

Stakeholder Views

Stakeholder input on the quality of service delivery was obtained through written comment and face-to-face discussions with a variety of individuals and representatives from key government agencies, community organisations and consumer groups. Among the stakeholders consulted were:

- Members of the NRS Consultative Committee
- Australian Group on Severe Communication Impairment

- Queensland Association of the Deaf
- Office of Hearing
- Office of Disability
- Australian Association of the Deaf (AAD)
- Communication Aid User Society Inc (CAUS)
- Human Rights and Equal Opportunity Commission (HREOC)
- Australian Communications Authority (ACA)
- Telecommunications and Disability Consumer Representation (TEDICORE)
- Better Hearing Australia
- US Federal Communications Commission
- UK Office of Telecommunications
- ACE representatives
- Individual users of the service

Overall, stakeholders had a general appreciation for ACE's performance to date. In particular it was recognised by many that there have been significant improvements in some aspects of the service, such as the removal of the need for a PIN and accounts for STD calls, and lower call blockage rates. It was also noted that many of the issues surrounding the NRS, such as technology and availability of equipment, are beyond the control of ACE to solve. Some of the views expressed by stakeholders are listed below.

Community Outreach Program:

- While most stakeholders believe that ACE is delivering the mechanics of the NRS effectively, some stakeholders believe that Outreach is not delivering the outcomes it should.
- More outreach activities are wanted in regional Australia.
- NRS promotional material needs to focus on the NRS rather than ACE.
- The NRS needs to be promoted to the wider community (not just deaf, hearing or speech impaired) as this would increase tolerance and awareness.
- When improvements to the service are made, a corresponding increased effort needs to be made to disseminate this information.
- ACE needs to be in closer communication with business who use phone services with Interactive Voice Response (IVR) systems as some stakeholders believe that this system is not equipped to handle a relay service call given the length of time it takes to relay a message.
- More needs to be done to address the interests of the speech-impaired community. For further information see: *Accessible information for people with speech and*

communication impairment, Janet Owens and the Communication Aid User Society, 2002 at http://www.users.bigpond.com/causinc/research.htm.

Complaints Mechanisms

The complaints handling mechanism operated by ACE received some comment by stakeholders. While ACE routinely receives few complaints (well within the Service Standard level), there was a view expressed that the complaints handling procedures of ACE are not always very user friendly. Several stakeholders noted that there has been an impression amongst NRS users that complaints handling is not always conducted 'at arms length' from the rest of the Service. Recent promotion of the Customer Hotline appears to have improved the knowledge of the separate complaints number.

Feedback Mechanisms

Currently, the main mechanisms for users to provide ACE feedback on their performance in delivering the NRS are the NRS Forum and the National Relay Service Consultative Committee (NRSCC). While the operation of these mechanisms is not the responsibility of ACE, some comments received related directly to ACE's response to the feedback procedures. Specifically, several stakeholders commented on the lack of action by ACE on issues brought up in the forums and in the NRSCC.

2. Possible Alternative Suppliers

Infrastructure, Human Resources, Management and Financial Capacities Required for the Delivery of the National Relay Service (NRS).

The Allen Consulting Group (ACG) found that, by and large, the current Australian Communication Exchange (ACE) operation provides a reasonable model for the operational requirements of the NRS.

To match current demand (and with current technology), any potential new provider of the NRS would need:

- about 200 staff, including approximately 150 Relay Officers and 8-9 people employed full-time in Community Outreach, located in more than one call centre;
- sophisticated telecommunications equipment and software, and trained technical staff;
- people in senior management with a strong understanding and an appreciation of the NRS client base;
- an uninterrupted power supply;
- significant initial and ongoing investment and operating capital.

It is important to understand that the process of assessing the requirements (or indeed testing the market) for an alternative supplier of the NRS involves more than just identifying individual firms with particular capabilities. Given the importance of the NRS, the process needs to be carefully managed to ensure the potential risks associated with shifting from an existing supplier to a new supplier are minimised.

Alternative Suppliers

In order to test the possibility of viable alternative suppliers existing in the current marketplace, an examination of bidders in the previous selection rounds was undertaken. While this was not an exhaustive testing of the market, it established the basic viability of a future tender process.

An examination of possible alternative suppliers in the current marketplace indicated that there are viable alternative suppliers of the NRS.

3. Management of the National Relay Service (NRS)

The Efficiency of the Service Delivery Model under the Current Arrangement

Best Practice

Australian Communication Exchange (ACE) compares well with standard call centres that are known to the evaluation team. In relation to facilities, the ACE operation is on par with call centres that handle much larger volumes of call centre traffic. ACE has modern equipment that runs sophisticated software with functionality (such as uninterruptible power for emergency use) that compares well with operations such as the Australian Taxation Office and Centrelink. Both ACE call centres have appropriate fit outs in line with best practice in call centres.

Relay officers in both ACE call centres seem to be less than fully utilised (probably on average less than 50 per cent), a point acknowledged by ACE. However, given the role of the NRS as essentially being a telephone exchange, it is not surprising that the utilisation rates would be less than that of standard call centres (best practice in Australian being around 77 per cent utilisation).

There is scope for ACE to make better use of relay officers, a point also acknowledged by ACE. ACE advises that it is currently investigating options for addressing relay officer utilisation rates.

Taking into account the operator utilisation rates above, ACE compares favourably with established standard call centre best practice when it comes to total employee expenses as a proportion of total expenses at around 72 per cent (not including Outreach related activities) compared with an average for Australian call centres of around 62 per cent.

The Effectiveness of the NRS under the Current Arrangement

‘Comparable’ Service

The term ‘effectiveness’ refers to whether the NRS Provider is delivering a relay service under the current arrangements in line with the legal and policy framework under which the NRS operates. This includes the Universal Service Obligation (USO), the definition of the standard telephone service, the NRS Plan and the *Disability Discrimination Act 199*2.

Speed and Accuracy of the Current System

In terms of the speed and accuracy of relayed messages, the NRS is ‘comparable’ to standard voice telephony, but not exactly equivalent. This is a function of a number of unavoidable factors:

- at least one of the call participants has to either type their messages into a text phone or have a message interpreted by a relay officer in the case of Speech-to-Speech Relay (SSR)
- the existence of a third party in any telephone call will always make a call longer and will introduce the possibility of errors in understanding or interpretation
- technological limitations—the TTY technology currently in use has a slow
- transmissions speed, slower than the typing speed of the average person, leaving users waiting for information to come through
- text ‘jumbling’— which involves inadvertent errors in the text messages when transmitted to and from a TTY and the NRS. The existence of ‘jumbling’ means that the accuracy of the message is sometimes less than 100 per cent

Nevertheless, the NRS is comparable to a standard telephone service from an access to the service point of view.

Call Blockage

Call blockage at the NRS is the equivalent of a standard telephone user not receiving a dial tone when he or she picks up the phone. When a call is blocked because of relay operator unavailability, ACE is not delivering a standard telephone service. For the small proportion of callers that do not get through to an operator immediately, calls are blocked and the caller receives a busy signal. These calls represent a small percentage of calls received by the NRS.

Awareness of and Usage by Target Groups of the Service

Reliable estimates of the size of the potential client base for the NRS are not readily available, reflecting a lack of detailed survey data and an incomplete understanding of how people who are deaf or who have a hearing and/or speech impaired choose to communicate.

Estimation of Potential Client Base for the NRS

According to ACE, out of a total existing customer base of 20 to 30 000:

- people with a speech impairment currently make up about five per cent of the NRS client base (or about 1250 people)
- people who are Deaf currently make up around 50 per cent of the NRS client base (or about 12 500 people)
- people with a hearing impairment currently make up around 25 per cent of the NRS client base (or about 6250 people)
- hearing people currently make up around 20 per cent of the NRS client base (or about 5000 people)

ACE is reluctant to estimate the size of the potential client population base with any precision because it is very difficult to gauge how people who are deaf or who are hearing and/or speech impaired choose to communicate. That is, it is possible that any two people who, on the surface, share a given degree of deafness, hearing or speech impairment, may or may not choose to use the NRS.

Awareness Amongst Hearing Impaired

ACE estimates that awareness of the NRS among people with a hearing impairment is very low at around 10 per cent. The Australian Association of the Deaf (AAD) offered a similar estimate. Better Hearing Australia, on the other hand, is of the view that awareness levels among people with a hearing impairment are even lower, perhaps closer to only five per cent. This low level of awareness may be attributed to the following reasons:

- Not all people with a hearing impairment will want or perhaps need to use the NRS
- People who are deaf identify with a specific ‘community’ or culture and are generally easier to ‘reach’ with educational programmes and advertising. People with a hearing impairment are typically a disparate group that will hardly ever identify with other people with a hearing impairment

Awareness Amongst Speech Impaired

Similarly, awareness of the NRS amongst people with a speech impairment was confirmed as being generally low by the Communication Aid Users Society (CAUS). Like people with a hearing impairment, those with speech impairment are a disparate group that are difficult to ‘reach’ with educational programmes and advertising, and they are also concerned about the cost of new communications technologies.

People Who Are Not Deaf or Do Not Have a Hearing and/or Speech Impairment

Some 20 per cent of NRS clients fall into this category. Anecdotal evidence of awareness in the general community of the NRS suggests that it is extremely low, and limited largely to the friends, family and other associates of current users and people in the organisations (businesses and government agencies) that receive calls from users through the NRS. Responses from people in the general community seem to indicate a very low or no awareness of the NRS. Better Hearing Australia is of the view that awareness levels among this group are perhaps only five per cent.

People From Non-English Speaking Backgrounds

ACE does not provide a relay service for people who would prefer (or can only) communicate in a language other than English. This includes those people who are deaf and who cite Auslan as their first language.

Research by ACE in 2002 into the possibility of a multi-lingual relay service indicated that it would not be viable. Reasons given by ACE for this include the following:

- Required equipment such as non-English teletypewriters is not readily available.
- The cost of interpreters would mean that the service was very expensive.
- Correspondence with representatives from the relevant communities indicates that it would not be likely to encourage many people to use the service.
- Many migrants from non-English speaking backgrounds have literacy problems in their own language, which would make use of text equipment ineffective and impractical.
- Providing such a service would go beyond the requirement that ACE provide access to a service that is comparable to a standard telephone service. Translation and interpreting services for people from non-English speaking backgrounds or for whom English is not their preferred language are not currently provided for conventional voice telephony. The Commonwealth Department of Immigration and Multicultural and Indigenous Affairs (DIMIA), through the Translating and Interpreting Service (TIS), provide a fee-free interpreting service. However, the provision of this is limited to certain English speaking individuals and groups in the community who provide settlement related services to permanent visa holders (that is, permanent residents) and Australian citizens who do not speak English.

Comparison with Other Relay Service Arrangements

The NRS Outreach Program run by the current NRS Provider seems to compare favourably with those run by overseas relay service providers. Government agencies responsible for ensuring relay services are provided often involve themselves directly in delivering Outreach services; however, this involvement is usually quite limited. In other cases such as in North America, Outreach responsibility is often split between the government and the provider, but the activities undertaken do not always appear to be as focused on NRS clients (as they are in Australia). Rather, they are often more concerned with disability issues in a wider context.

4. Key Issues for the Future of the National Relay Service (NRS)

Projected Future Usage of the NRS

It is difficult to predict future usage of the NRS (as measured by the total number of call minutes for individual service streams) due to very little specific information available that would allow an accurate breakdown of likely future usage of each of the NRS service streams currently offered.

Given the stakeholder comments about lack of awareness, it is fair to conclude that there is some way to go before saturation of the market is achieved.

While ACE could not provide estimates for individual service streams, it does estimate that usage of the NRS (as measured by total call minutes) will continue to grow until 2003–04, after which time call volumes will be static (2004–05) and then decline slightly in 2005–06. These estimates are based on expected call traffic, taking into account the number of standard working days in a year.

There are, however, a number of assumptions that are likely to affect future usage of the different service streams. Each of these assumptions can be expected to have a neutral, positive or negative impact on growth in call minutes.

It is expected that:

- affordable mobile capable textphones will be available in Australia by July 2004, which will extend expected growth in call minutes by a few years (positive);

- other customer equipment used to access the NRS will not change significantly before 2005-06 (neutral);

- Short Message Service (SMS) will maintain its prominence and rate of growth (negative);

- the current level of Outreach activities will continue (neutral);

- Speech to Speech Relay (SSR) call volumes will increase, but remain a very low proportion of the total NRS volumes (neutral);

- direct Teletypewriter (TTY) to NRS volumes will continue to be influenced by SMS and that Voice Carry Over (VCO) will increase as a percentage of total call volumes, offsetting the migration to SMS (neutral); and

- the current increase in calls related to improved NRS billing systems will plateau (neutral).

A number of possible developments that may unexpectedly impinge (either increase or decrease) on the total number of call minutes for individual service streams, are listed below.

- Carriers and Carriage Service Providers (CSPs) may improve their Disability Equipment Programs (DEPs) and offer a wider range of equipment with more functionality (increase).
- The NRS Provider may move towards a Communication Hub model, which would mean that more direct telecommunication services become available (decrease).

- A viable Video Relay Service (VRS) is introduced, providing Auslan users with more access (increase).
- Major community events (e.g. World Deaflympics in Melbourne 2005) will impact on volumes (increase).
- Significant improvements to NRS equipment will result in improved quality of service (increase).
- An increase in Outreach activity or an increase in the effectiveness of Outreach activity may increase the awareness of the service (increase).
- Unexpected Outreach 'breakthroughs' such as major national media attention improves awareness (increase).
- The expected introduction of a New Zealand relay service may impact on the number of people willing to make international calls (increase).

Increasing awareness through more effective Outreach services and more effective technology is likely to increase the attractiveness of the NRS and hence the number of likely users. On the other hand, the prevalence and popularity of substitute technologies, particularly those that enable person-to-person communication without the NRS, is likely to decrease patronage of the NRS in the foreseeable future. While the net impact is uncertain, it is unlikely that demand for the NRS in the form of total call minutes will rise in the period leading up to 2006.

Effect of Ancillary and Substitute Technologies

There are a number of technical and other developments in telecommunications that will potentially impact on the operation of the NRS. These include:

- The availability of Chat software that enables people to communicate over the Internet in close to or real time, with minimal bandwidth requirements.
- The introduction of special SMS-only plans for mobile phones which lower the cost of access to SMS and the development of full keyboards for mobile phones making it easier to create a message.
- The increase in computer ownership which has resulted in e-mail communications being widely available at low cost.
- The significant gap in the telecommunications services available to people who are deaf, hearing and/or speech impaired and who can no longer use their mobile telephones with their portable TTYs since the analogue mobile service was shut down in 2000.

It should be noted that SMS, e-mail, and the use of Chat software that does not enable real-time communication, while providing a communication service, are not considered to be the equivalent to a 'standard telephone service'. This is because these services are not guaranteed to be in real-time, do not have appropriate service standards, and are not universally available.

Major Technological and Other Developments

There are a number of other technologies, communications devices and protocols that could potentially impact on the future of the NRS. Some new telecommunications technologies are expensive when first introduced, but their price declines when they are more widely adopted.

Internet Protocol Relay (IP Relay)

In relay terms the TTY is used as a device used to type text and send it across the telephone network to the relay service, who in turn makes a connecting voice call to facilitate communication. In North America relay users are now able to use any Internet connected device that has a browser, as a replacement for the TTY. As the bandwidth requirements are minimal, almost any Internet terminal becomes an access device for relay. IP Relay is particularly useful in the workplace and when travelling, where conventional TTYs may not be readily available.

V.18

V.18 allows equipment using a number of different communications protocols to communicate.

The problem of incompatible communication protocols, particularly with TTYs of different countries, has been addressed through the development of a new specification called V.18.

The introduction of V.18 could allow some mobile telecommunication for the deaf community. For example, in Europe the Nokia 9000 range includes a V.18 modem chip allowing communication with TTYs.

Video Relay

Auslan is a very efficient language, but requires high level two way broadband capacity (at least 384 kbps) to capture the rapid movements of the users via video relay. This capacity is potentially available in Australia, but access to video relay is still expensive in terms of both equipment and ongoing cost.

The Wireless Information Service for Deaf people On the Move (WISDOM) Project

WISDOM is a project funded by the European Commission and by partners in telecommunications in four countries in Europe. Some aspects of this project lie outside the standard telephone service. The WISDOM project will realise a mobile video telecommunications device for deaf people with access to a video server through text/graphic menus and directly through sign language recognition. Specific design features for deaf and elderly people will be included. Trials will be conducted with remote interpreting.