

**COMMUNICATIONS
ALLIANCE LTD**



DISABILITY MATTERS: ACCESS TO
COMMUNICATION TECHNOLOGIES FOR PEOPLE
WITH DISABILITIES AND OLDER AUSTRALIANS

INDUSTRY GUIDELINE

G586:2006

G586:2006 Disability Matters: Access to Communication Technologies for People with Disabilities and Older Australians Industry Guideline

First published as ACIF G586:2001 Access to Telecommunications for People with Disabilities Industry Guideline

Communications Alliance Ltd was formed in 2006 to provide a unified voice for the Australian communications industry and to lead it into the next generation of converging networks, technologies and services. ACIF is a division of Communications Alliance.

Disclaimers

1. Notwithstanding anything contained in this Industry Guideline:
 - (a) Communications Alliance disclaims responsibility (including where Communications Alliance or any of its officers, employees, agents or contractors has been negligent) for any direct or indirect loss, damage, claim, or liability any person may incur as a result of any:
 - (i) reliance on or compliance with this Industry Guideline;
 - (ii) inaccuracy or inappropriateness of this Industry Guideline; or
 - (iii) inconsistency of this Industry Guideline with any law; and
 - (b) Communications Alliance disclaims responsibility (including where Communications Alliance or any of its officers, employees, agents or contractors has been negligent) for ensuring compliance by any person with this Industry Guideline.
2. The above disclaimers will not apply to the extent they are inconsistent with any relevant legislation.

Copyright

© Communications Alliance Limited 2006

This document is copyright and must not be used except as permitted below or under the Copyright Act 1968. You may reproduce and publish this document in whole or in part for your or your organisation's own personal or internal compliance, educational or non-commercial purposes. You must not alter or amend this document in any way. You must not reproduce or publish this document for commercial gain without the prior written consent of Communications Alliance. Organisations wishing to reproduce or publish this document for commercial gain (i.e. for distribution to subscribers to an information service) may apply to subscribe to the Communications Alliance Publications Subscription Service by contacting the Communications Alliance Commercial Manager at info@commsalliance.com.au. If you publish any part of this document for any purpose, you must also publish this copyright notice as part of that publication.

INTRODUCTION

Background

In 2003, according to the Australian Bureau of Statistics (ABS), some 3.95 million people in Australia or 20 per cent of the population, living in households or cared accommodation had a disability (ABS, *Survey of Disability, Ageing and Carers*, 2003). The survey also found that the likelihood of having a disability generally increased with age. In a recent report, the Productivity Commission predicted that one quarter of Australians will be aged 65 or over within the next 40 years (Productivity Commission, *Economic Implications of an Ageing Australia*, November 2004). Taken together, the reports indicate that there is a significant and growing number of Australians with disabilities who will require communications products, services and information about them, to be made available in such a way as to meet their specific communication needs.

Many older Australians with hearing or sight loss, or poor hand dexterity attribute this reduced functionality to their increasing age. They tend not to identify with any disability group or organisation. While people with disabilities get information from relevant disability organisations, older Australians rely on it being available in the public arena. For their needs to be recognised, it will become increasingly necessary for accessible products, services and information to be available in the mainstream.

This Guideline outlines considerations for industry participants to ensure the needs of both groups are met now and in the future.

Over the past five years considerable advances have been made in communications technologies. Digital mobile telephony is being rapidly expanded by the development and uptake of products and services in third generation (3G) networks so that films, news, email and video communications are available in a mobile environment. This is one example of advances that have led to convergence of telecommunications with information and communication technology, broadcasting, and mass media. These changes need to be considered in the context of the impact they may have on equity in access for people with disabilities and older people. In fact, the new telecommunications environment has the potential for enhanced accessibility to an increased range of products and services for people with disabilities and older people.

This Guideline outlines considerations for industry participants to ensure that the communication needs of people with disabilities and older people continue to be met in the current and emerging communications environments. It is intended to act as an underlying set of guidelines for consideration in all Communications Alliance activities and those of industry participants, and is for the information of consumers with a disability. It is broad in scope in order that it may accommodate future technologies, and does not preclude the inclusion of other specific accessibility requirements as needed.

Measures to assist people with disabilities

In Australia, existing legislation protects the right of equitable access to communication technologies for people with disabilities. The *Disability Discrimination Act 1992* (Cth) and related State and Territory legislation prohibit discrimination against people with disability in the provision of goods and services.

The Universal Service Obligation under Section 19 of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (Cth) has been interpreted by the Human Rights and Equal Opportunities Commission (HREOC) to mean that all people, including people with disabilities, should have access to a Standard Telephone Service (STS). The

definition of an STS in Section 6 of the same Act also recognises that other forms of communication might be provided if voice telephony is not practical for a customer with a disability.

The Telecommunications (*Equipment for the Disabled*) Regulations 1998, made under Section 142(a) of the *Telecommunications Act 1997* (Cth) ensures that people with disabilities are provided with equipment necessary for them to access the STS, provided under the Universal Service Obligation. This Guideline applies regardless of how the STS is delivered.

Under section 380 of the *Telecommunications Act 1997*, the Australian Communications and Media Authority (ACMA) may make a standard relating to features of customer equipment used in connection with an STS that are designed to cater for people with disabilities. The telecommunications disability standard (AS/ACIF S040:2001 Requirements for Customer Equipment for use with the Standard Telephone Service – Features for special needs of persons with disabilities) was made by ACMA under section 380 of the Act. This Standard mandates that an STS handset has a raised 'pip' on the '5' button on the number pad of the handset or key board and that handsets can enable coupling to a hearing aid (excluding handsets for cellular mobile telephones and cordless telephones that use transmission technology that prevents effective coupling to hearing aids).

In addition, there are a number of ACIF Codes and Guidelines which have particular relevance to people with disabilities, particularly ACIF C625:2005 Information on Accessibility Features for Telephone Equipment Industry Code. Additionally, many consumer Codes specifically require industry participants to ensure that information provided to customers is accessible.

Development and adaptation of equipment for use by people with disabilities should be done with a view to maximising its end-to-end connectivity with equipment in Australia and world wide. In addition, although the Australian Government Information Management Office (AGIMO) set the minimum standards for website accessibility in Australia, international standards such as those set by the World Wide Web Consortium (W3C) are regarded as essential to make websites accessible to the maximum number of people with disabilities.

Further information on measures to assist people with disabilities is in Section 5.

Development of the Guideline

The original Guideline was developed in 2001 by the (then) ACIF Disability Advisory Body (DAB) in order to assist ACIF, its members and industry participants to meet their obligations under legislation to ensure equity of access to communications products and services, as well as to all information supplied or requested. The Disability Council meets quarterly to review Communications Alliance's works program and provides advice to Communications Alliance regarding the implications for people with disabilities of its publications. Disability Council members participate in the work of Communications Alliance through membership of Reference Panels, Working Committees and other working groups.

Christopher Newell

Chair

Disability Council

TABLE OF CONTENTS

1	GUIDING PRINCIPLES	2
	1.1 The COST 219bis Telecommunications Charter	2
	1.2 Universal Design	2
2	OBJECTIVES	3
	This Guideline is intended to:	3
3	GUIDELINES	4
	3.1 Consultation with People with Disabilities	4
	3.2 Provision of Information	4
	3.3 Universal Design	6
4	GUIDELINE REVIEW	7
5	REFERENCES: LEGISLATION AND INFORMATION	8
	5.1 Relevant Australian Legislation	8
	5.2 Relevant Australian Information	9
	5.3 Relevant U.S. Legislation	10
	5.4 Relevant US Information	11
	5.5 International Information, Standards and Guidelines	12
	5.6 Relevant European Information	14
	5.7 Japanese Standards and Guidelines	15
	APPENDIX: THE PRINCIPLES OF UNIVERSAL DESIGN	16
	PRINCIPLE ONE: EQUITABLE USE	16
	PRINCIPLE TWO: FLEXIBILITY IN USE	16
	PRINCIPLE THREE: SIMPLE AND INTUITIVE USE	16
	PRINCIPLE FOUR: PERCEPTIBLE INFORMATION	17
	PRINCIPLE FIVE: TOLERANCE FOR ERROR	17
	PRINCIPLE SIX: LOW PHYSICAL EFFORT	17
	PRINCIPLE SEVEN: SIZE AND SPACE FOR APPROACH AND USE	18
	PARTICIPANTS	19

1 GUIDING PRINCIPLES

The Communications Alliance Disability Council endorses the COST 219bis (1999) Telecommunications Charter set out below as a statement of principles which will improve access and equity in telecommunications for people with disabilities and as a basis for the more specific provisions of this Guideline.

1.1 The COST 219bis Telecommunications Charter

- 1.1.1 Telecommunication facilities and services should be accessible to all.
- 1.1.2 The needs of older people and people with disabilities should be taken into account in the design of any new telecommunication equipment or service. Terminal equipment should be designed for the widest possible market. Network services should adequately support relevant special terminal functions so that all users experience equivalent end-to-end service.
- 1.1.3 Where inclusive design is not possible, provision should be made for people with disabilities to access the service by means of additional equipment and services.
- 1.1.4 People with disabilities should, as far as possible, be able to use telecommunication services at prices equivalent to those without disabilities. Most of the additional costs of providing access to all should be met by dedicated funds or absorbed within general operating costs.
- 1.1.5 Providers of telecommunication equipment and services and regulatory authorities should consult regularly with disabled and older users about their access requirements and take appropriate action. Equally, organisations representing older people and people with disabilities should be prepared to contribute their knowledge and experience.
- 1.1.6 Telecommunication products and services that improve and increase access for older and disabled people should be actively advertised and promoted, with information also available in accessible formats.

1.2 Universal Design

The Disability Council emphasises its endorsement of the principles of Universal Design, in particular the principle that accessibility features are included as an integral part of the initial design development process, obviating the need for the addition of post-production adaptations (see the Appendix).

2 OBJECTIVES

This Guideline is intended to:

- (a) provide guidance for Communications Alliance, including Reference Panels, Working Committees and other Groups when developing Standards, Codes, Guidelines or other documents so that equity in access to telecommunications products, services and information for people with disabilities is ensured, and that responsibilities under relevant legislation are met;
- (b) encourage appropriate consultation with the Disability Council in the process of developing Standards, Codes, Guidelines, or other documents or activities that may impact on people with disabilities;
- (c) inform industry participants as to how they can operate to provide equity in access to communications products, services and information such that they meet the requirements under relevant legislation;
- (d) encourage all industry participants to consider Universal Design features in all development processes;
- (e) inform industry participants as to how they can ensure that information provided to people with disabilities is accessible. This includes the following measures by industry:
 - (i) industry participants' front of house staff have the training and facilities to provide information about features of the carriers' or carriage service providers' products and services that make their use accessible to people with disabilities; and
 - (ii) the information itself is accessible to people with disabilities; and

NOTE:

This can include providing information in large font sizes or on accessible websites.

- (f) be a document to which consumers may refer for information about equity in and access to communications for people with disabilities.

NOTE:

This Guideline does not provide legal advice or substitute for any specific obligation that industry participants must comply with under legislation, including but not limited to the Disability Discrimination Act 1992 and related State and Territory legislation, the Telecommunications Act 1997 and the Telecommunications (Consumer Protection and Service Standards) Act 1999.

3 GUIDELINES

3.1 Consultation with People with Disabilities

NOTE:

In order to meet obligations prescribed in legislation, it is practical to always consult with people with disabilities in the inaugural stages of the sourcing, development or introduction of any such goods or services, in order to identify and rectify any likely negative impacts upon them.

3.1.1 Consultation with people with disabilities by Communications Alliance:

- (a) Where an ACIF Standard, Code, Guideline or other document is likely to impact on people with disabilities, the Disability Council should be consulted at the initial stage of development. In such cases, whenever possible a member/s of the Disability Council should be a member/s of the relevant Working Committee or other group.
- (b) Where member/s of the Disability Council are not member/s of the relevant Working Committee or other group, the Working Committee or other group should consult with the Disability Council at various points in the process including prior to release for public comment.
- (c) As necessary, Communications Alliance may also seek advice from other disability organisations or person/s with disabilities.

3.1.2 Consultation with people with disabilities by industry:

Where products, services or information are likely to impact on people with disabilities, industry participants should consult with appropriate people with disabilities in the initial stages of its development.

3.2 Provision of Information

NOTE:

Equity in access to communications products and services is linked to equity in access to information about such products and services.

For people with disabilities the term 'accessible information' has two levels of meaning. The first refers to the manner in which the information is presented, and use of the term accessible formats is common. The second refers to the ease of comprehension of the information presented.

Information may be provided indirectly by way of brochure or website, or directly by phone or in face-to-face presentation.

3.2.1 Indirect Provision of Information:

Communications Alliance and industry members should ensure that:

- (a) Standards, Codes and Guidelines that impact on consumers are written in plain English or have available an explanation of the Standard, Code or Guideline in plain English;
- (b) any documentation is made available in alternative formats upon request. This includes, but is not limited to large print, Braille or electronic format. Electronic documentation should be created in such a way that it is accessible to computer screen reader software used by people who are blind or have vision impairment;
- (c) all printed consumer information is designed with appropriate font size, style and colour, appropriate colour contrast between background and text, and with clear, defined graphics to maximise their readability for people with vision impairment;
- (d) all industry websites, including the Communications Alliance website, meets international web accessibility guidelines at least to the standard required by the Australian Government Information Management Office (AGIMO) (see Section 5).

3.2.2 Direct Provision of Information

NOTE:

Equity in access to direct modes of giving information means that a range of different ways of interacting with people with disabilities should be available, and the appropriate one used on request.

- (a) Customer enquiry or assistance lines should include sufficient text communication facilities (such as TTY lines) for people who are deaf, speech or hearing impaired. Facilities provided should enable communication in real time. Customer enquiry or assistance service operators should receive regular training in the efficient use of the relevant communication devices.
- (b) Customer service staff should receive regular training in the use of a range of communication modes, including but not limited to:
 - (i) use of a speech synthesizer and a communications board;
 - (ii) Use of a speech interpreter and a sign language interpreter; and

- (iii) Communications using the National Relay Service.
- (c) Customer enquiry or assistance service counter staff should provide facilities which enable communication. Examples include, but are not limited to:
 - (i) on request, sign language interpreters for Deaf people; and
 - (ii) hearing augmentation (such as a hearing loop) for people who are hearing impaired.
- (d) Service providers should ensure that customers can be easily assisted by an advocate, if required, when communicating with a supplier. An advocate can be an attendant care worker, family member, friend or other person nominated by a customer with a disability, non-English speaking background or other special need to assist the customer.
- (e) When ACIF Standards, Codes and Guidelines mention access to the Emergency '000' number, the TTY Emergency number '106' should also be mentioned.

3.3 Universal Design

The principles of Universal Design should be taken into account, where relevant, in the development of Standards, Codes and Guidelines, and in the development of all products and equipment (see the Appendix).

4 GUIDELINE REVIEW

This Guideline will be reviewed by the Communications Alliance Disability Council within five years of it being published.

5 REFERENCES: LEGISLATION AND INFORMATION

The information in this section is provided to assist with the application of these Guidelines.

There is both national and international legislation to ensure non-discrimination including in the provision of services, and increasingly, national and international guidance on the steps industry can take to achieve equality in accessibility.

The references in this section are provided as a background indicating that the Guidelines are part of a greater body of work in terms of accessibility to communications technologies.

As well as legislation, some industry participants and consumer organisations have developed Disability Action Plans, Guides or Manuals which outline best practice procedures for consulting with people with disabilities. Reference links to some examples of these are in Section 5.2.2 below.

5.1 Relevant Australian Legislation

5.1.1 *Disability Discrimination Act 1992 (Cth)*

The Federal Disability Discrimination Act 1992 (DDA) provides protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people.

Disability discrimination happens when people with disabilities are treated less fairly than people without a disability.

A brief guide to the Disability Discrimination Act may be accessed online at the website for the Human Rights and Equal Opportunity Commission.

http://www.hreoc.gov.au/disability_rights/dda_guide/dda_guide.htm

5.1.2 *Telecommunications (Consumer Protection and Service Standards) Act 1999 (Cth)*

The Act provides for a universal service regime which consists of the universal service obligation (USO). The purpose of the USO is to ensure that all people in Australia, wherever they reside or carry on business, should have reasonable access, on an equitable basis, to the standard telephone service, payphones and prescribed carriage services.

5.1.3 *Telecommunications (Equipment for the Disabled) Regulations 1998*

These regulations specify the type of equipment that may be supplied for connection to the standard telephone service by people with disabilities.

This Act and the associated Regulations may be accessed online from the Legislation page on the website for the Department of Communications, Information Technology and the Arts:
http://www.dcita.gov.au/tel/legislation/acts_and_regulations

5.2 Relevant Australian Information

5.2.1 Relevant ACIF Consumer Documents

ACIF Standards, Codes and Guidelines may be accessed online via the ACIF home page at: <http://www.commsalliance.com.au>. The of the most relevant documents are:

- (a) ACIF C521:2004 Customer Information on Prices, Terms and Conditions Industry Code;
- (b) ACIF C525:2006 Handling of Life Threatening and Unwelcome Calls Industry Code;
- (c) ACIF C536:2003 Emergency Call Service Requirements Industry Code
- (d) ACIF C625:2005 Information on Accessibility Features for Telephone Equipment Industry Code; and
- (e) ACIF G627:200 Operational Matrices for Reporting on Accessibility Features for Telephone Equipment Industry Guideline.

5.2.2 Disability Action Plans and Good Practice Guides

- (a) Australian Mobile Telephone Association (AMTA) Mobile Phone Industry Good Practice Guide: Accessibility for People with Disabilities can be accessed online at: <http://www.amta.org.au/?Page=613>
- (b) Optus Disability Action Plan can be accessed on line from the Optus Home Page at: <http://www.optus.com.au> and doing a search for 'Disability Action Plan'.
- (c) Telstra Disability Action Plan can be accessed online at: http://www.telstra.com.au/disability/action_plan.htm
- (d) Australian Government Information Office (AGIMO) Guide to Minimum Website Standards can be accessed on line from www.agimo.gov.au/MWS

5.2.3 Human Rights and Equal Opportunity Commission (HREOC)

- (a) Disability Action Plans are lodged with HREOC. The HREOC Telecommunications Action Plan register may be accessed online at: http://www.hreoc.gov.au/disability_rights/action_plans/Register/register.html

- (b) Guidelines for Meeting the Communication Needs of People who are Deaf or have a Hearing Impairment.

NOTE:

It is important that the communication needs of Deaf people are met. A range of communication methods are used according to the nature of the hearing impairment, and it is necessary to use the one that is most appropriate in any given interactive situation. Deafness Forum of Australia has published Guidelines to assist in this process.

*For further information go to:
<http://www.deafnessforum.org.au/policyindex.htm>, or contact Deafness Forum.*

- 5.2.4 Australian Information on Plain English:

NOTE:

It is important to write documents in plain English so that as many people as possible can understand the meaning of the documents.

For advice on writing in Plain English, see Eagleson, R. (1997) Writing in Plain English, AGPS, Canberra.

5.3 Relevant U.S. Legislation

- 5.3.1 Communications Act of 1934

Section 255 of the Communications Act requires telecommunications manufacturers and service providers to make their products and services accessible to people with disabilities, if readily achievable.

Information on Section 255 of the Communications Act may be accessed online at:

<http://www.fcc.gov/cgb/consumerfacts/section255.html>

- 5.3.2 Americans with Disabilities Act 1990

The Americans with Disabilities Act (ADA) 1990 ensures that there is equal opportunity for people with disabilities.

Provisions of the Act may be accessed online at:
<http://www.usdoj.gov/crt/ada/adahom1.htm>

This website includes a link to the ADA Standards for Accessible Design including details on accessibility to payphones.

- 5.3.3 The Rehabilitation Act Amendments 1998 - Electronic and Information Technology

The U.S. Government requires, based on amended legislation (Section 508 of the Rehabilitation Act), that all federal

government employees including those with a disability should have the same opportunity to use hardware and software in the workplace. To achieve this, the U.S. federal government states in its procurement policy that hardware and software meeting accessibility criteria in the Section 508 Guidelines shall be preferred in purchasing decisions.

Governments and their agencies are very large purchasers of goods and services and thus have the power to strongly influence the market. This is having a tremendous effect as major hardware and software companies have to ensure that accessibility is now incorporated into their products in order to supply to the U.S. Government.

The amendments for Section 508 of the Rehabilitation Act are at: <http://www.access-board.gov/about/laws/rehab-508.htm>

The Electronic and Information Technology Accessibility Guidelines for Section 508 are at: <http://www.access-board.gov/sec508/standards.htm>

There will be a review of these Guidelines in 2006 and is expected to be completed by late 2007.

Further information for vendors and government procurement officials is at: <http://www.section508.gov/>

5.4 Relevant US Information

5.4.1 Trace Center

The Trace Center is a U.S. federally-funded centre focussed on developing more accessible products and services for people with disabilities with a particular focus on technology. An online design tool to assist in the development of more usable products has been developed.

See http://www.trace.wisc.edu/world/tool_nav.html

The Trace Center has been funded to run, together with Gallaudet University, the Rehabilitation Engineering Research Center on Telecommunications Access. The primary mission of the Telecommunications Access RERC is to advance accessibility and usability in existing and emerging telecommunications products for people with all types of disabilities. One of its key focus areas will be VoIP

Further information is at: <http://trace.wisc.edu/telrerc/>

5.4.2 Center for Universal Design

The Center for Universal Design is a US national research, information, and technical assistance centre that evaluates, develops, and promotes universal design in a number of application areas.

See <http://www.design.ncsu.edu:8120/cud/>

5.4.3 Federal Communications Commission's Disability Rights Office

The US Disability Rights Office of the Federal Communications Commission provides technical assistance to consumers, businesses and government agencies on their rights and responsibilities to facilitate disability access in communications.

See <http://www.fcc.gov/cgb/dro/>

5.4.4 U.S. Access Board

The U.S. Access Board is an independent Federal agency devoted to accessibility for people with disabilities. Created in 1973 to ensure access to federally funded facilities, the Board is now a leading source of information on accessible design. The Board develops and maintains design criteria for the built environment, transit vehicles, telecommunications equipment, and for electronic and information technology. It also provides technical assistance and training on these requirements and on accessible design and continues to enforce accessibility standards that cover federally funded facilities. Further information is at: <http://www.access-board.gov/>

5.5 International Information, Standards and Guidelines

5.5.1 UN Universal Declaration of Human Rights

"..this Universal Declaration of Human Rights [is] a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society.... shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance...."

In the context of this Guideline, denial of equitable access to communications technologies can be viewed as a breach of the human rights of people with disabilities. The 30 Articles of this declaration may be accessed online at: <http://www.un.org/Overview/rights.html>

5.5.2 ITU-T

The ITU Telecommunication Standardization Sector (ITU-T) is one of the three Sectors of the International Telecommunications Union. Its mission is to ensure an efficient and on-time production of high quality standards (Recommendations) covering all fields of telecommunications.

Question 26 within Study Group 16 relates to Accessibility to Multimedia Systems and Services. Guidelines are being developed for completion in 2006 for use by standards makers, manufacturers, network operators and regulators.

Further information is at: <http://www.itu.int/ITU-T/studygroups/com16/sg16-q26.html>

5.5.3 United Nations

United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993) - Rule 5: Accessibility.

States should ensure that new computerized information and service systems offered to the general public are either made initially accessible or are adapted to be made accessible to persons with disabilities.

Although not a legally binding instrument, the Standard Rules represent a strong moral and political commitment of Governments to take action to attain equalisation of opportunities for persons with disabilities. The rules serve as an instrument for policy-making and as a basis for technical and economic cooperation. Ongoing monitoring of the implementation of the Rules takes place by the UN.

The Standard Rules are at:
<http://www.un.org/esa/socdev/enable/dissre00.htm>

5.5.4 World Wide Web Consortium (W3C)

The World Wide Web Consortium (W3C) develops interoperable technologies specifications, guidelines, software, and tools for Web applications.

The W3C developed Web Content Accessibility Guidelines in 1999.

These Guidelines explain how to make Web content accessible to people with disabilities. The Guidelines are intended for all Web content developers (page authors and site designers) and for developers of authoring tools. The primary goal of these guidelines is to promote accessibility. However, following them will also make Web content more available to all users, whatever user agent they are using (e.g., desktop browser, voice browser, mobile phone, automobile-based personal computer, etc.) or constraints they may be operating under (e.g., noisy surroundings, under- or over-illuminated rooms, in a hands-free environment, etc.).

Following these Guidelines will also help people find information on the Web more quickly. These guidelines do not discourage content developers from using images, video, etc., but rather explain how to make multimedia content more accessible to a wide audience.

The Guidelines 1.0 are at: <http://www.w3.org/TR/WCAG10/>

These Guidelines are used as a basis of Australian web content accessibility guidelines.

The Guidelines have been updated and the draft Guidelines 2.0 are expected to adopted by W3C later in 2006. Further

information is at: <http://www.w3.org/TR/2006/WD-WCAG20-20060427/>

5.5.5 International Organisation for Standardisation (ISO)

ISO is a network of the national standards institutes of 156 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system.

ISO's Technical Committee (TC 159 - Ergonomics) on Human-System Interaction is developing Accessibility guidelines for information/communication technology (ICT) equipment and services. These may be completed later in 2006.

Further details are at:

<http://www.iso.org/iso/en/CatalogueDetailPage.CatalogueDetail?CSNUMBER=40727&scopelist=PROGRAMME>

In addition, ISO's Joint Technical Committee on Information Technology in Accessibility (JTC1/SWG) has the following work plan:

- (a) Development of User Needs Summary;
- (b) Gap Analysis: Evaluate standards so that user needs are taken into account; and
- (c) Recommendations of standardisation strategy to standardisation development organisations.

5.6 Relevant European Information

5.6.1 COST 219ter

COST 219ter, Accessibility for All to Services and Terminals for Next Generation Networks, is a European Union-supported Action comprising representatives from telecommunications companies, disability organisations and research institutions from European and other countries such as Australia.

The main objective of the Action is to increase the accessibility of next generation telecommunication network services and equipment to elderly people and people with disabilities by design or, alternatively, by adaptation when required.

In cases where this cannot be achieved, the Action will aim at promoting the establishment of appropriate supplementary assistive services and equipment.

Taking always into account the "Design for All" concept in telecommunications and teleinformatics, especially in the mobile field, the objectives of the Action can be specified in operational terms as follows:

- Extend the existing COST 219 database and the knowledge required for designers on consumers and their requirements,

so that many more disabled and elderly people can be catered for in mainstream design,

- Support the exchange of Inclusion and Accessibility issues so that these can be freely explored with developers, researchers and representatives of the telecommunications industries and service providers,

so that

- Disabled and elderly people are enabled to share in the benefits of new mobile communication systems as discriminating consumers from the outset, but not being discriminated against.

Information about COST 219ter may be accessed online at:
<http://www.tiresias.org/cost219ter>

5.7 Japanese Standards and Guidelines

The Japanese standards organisation, JISC has developed a series of accessibility guidelines that may be used as a public procurement tool.

These are two-tiered: one level being top-level descriptions of accessibility and the second level being specific guidelines relating to web, telecommunications and IT accessibility. These guidelines are being used as a base document for the development of ISO TC 159 Guidelines.

For further information is at:

<http://www.webstore.jsa.or.jp/webstore/Top/indexEn.jsp>, Select "JIS Search" and Enter "X8341" in "Standard No."

APPENDIX: THE PRINCIPLES OF UNIVERSAL DESIGN

The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

The authors, a working group of architects, product designers, engineers and environmental design researchers, collaborated to establish the following Principles of Universal Design to guide a wide range of design disciplines including environments, products, and communications. These seven principles may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments.

The Principles of Universal Design are presented here, in the following format: name of the principle, intended to be a concise and easily remembered statement of the key concept embodied in the principle; definition of the principle, a brief description of the principle's primary directive for design; and guidelines, a list of the key elements that should be present in a design which adheres to the principle. (Note: all guidelines may not be relevant to all designs.)

PRINCIPLE ONE: EQUITABLE USE

The design is useful and marketable to people with diverse abilities.

Guidelines:

- (a) Provide the same means of use for all users: identical whenever possible; equivalent when not.
- (b) Avoid segregating or stigmatizing any users.
- (c) Provisions for privacy, security, and safety should be equally available to all users.
- (d) Make the design appealing to all users.

PRINCIPLE TWO: FLEXIBILITY IN USE

The design accommodates a wide range of individual preferences and abilities.

Guidelines:

- (a) Provide choice in methods of use.
- (b) Accommodate right- or left-handed access and use.
- (c) Facilitate the user's accuracy and precision.
- (d) Provide adaptability to the user's pace.

PRINCIPLE THREE: SIMPLE AND INTUITIVE USE

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Guidelines:

- (a) Eliminate unnecessary complexity.
- (b) Be consistent with user expectations and intuition.
- (c) Accommodate a wide range of literacy and language skills.
- (d) Arrange information consistent with its importance.
- (e) Provide effective prompting and feedback during and after task completion.

PRINCIPLE FOUR: PERCEPTIBLE INFORMATION

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Guidelines:

- (a) Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- (b) Provide adequate contrast between essential information and its surroundings.
- (c) Maximize "legibility" of essential information.
- (d) Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
- (e) Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

PRINCIPLE FIVE: TOLERANCE FOR ERROR

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Guidelines:

- (a) Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- (b) Provide warnings of hazards and errors.
- (c) Provide fail safe features.
- (d) Discourage unconscious action in tasks that require vigilance.

PRINCIPLE SIX: LOW PHYSICAL EFFORT

The design can be used efficiently and comfortably and with a minimum of fatigue.

Guidelines:

- (a) Allow user to maintain a neutral body position.
- (b) Use reasonable operating forces.
- (c) Minimize repetitive actions.
- (d) Minimize sustained physical effort.

PRINCIPLE SEVEN: SIZE AND SPACE FOR APPROACH AND USE

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Guidelines:

- (a) Provide a clear line of sight to important elements for any seated or standing user.
- (b) Make reach to all components comfortable for any seated or standing user.
- (c) Accommodate variations in hand and grip size.
- (d) Provide adequate space for the use of assistive devices or personal assistance.

Please note that the Principles of Universal Design address only universally usable design, while the practice of design involves more than consideration for usability. Designers must also incorporate other considerations such as economic, engineering, cultural, gender, and environmental concerns in their design processes. These Principles offer designers guidance to better integrate features that meet the needs of as many users as possible.

Version 2.0 - 4/1/97, Compiled by advocates of universal design, listed in alphabetical order: Bettye Rose Connell, Mike Jones, Ron Mace, Jim Mueller, Abir Mullick, Elaine Ostroff, Jon Sanford, Ed Steinfeld, Molly Story, and Gregg Vanderheiden. Major funding provided by: The National Institute on Disability and Rehabilitation Research, U.S. Department of Education

Copyright 1997 NC State University, The Center for Universal Design

PARTICIPANTS

This Industry Guideline was developed by members of the Communications Alliance Disability Council, consisting of representatives of the following organisations:

Organisation	Membership	Representative
Australian Association of the Deaf (AAD)	Voting	Andrew Wiltshire
Australian Federation of Disability Organisations (AFDO)	Voting	Christopher Newell
Australian Rehabilitation and Assistive Technology Association (ARATA)	Voting	Rob Garrett
Blind Citizens Australia (BCA)	Voting	Tony Starkey
Deafness Forum of Australia (DF)	Voting	Andrew Stewart
National Council on Intellectual Disability (NCID)	Voting	Loretta Kreet
Physical Disability Council of Australia (PDCA)	Voting	Harold Hartfield
Telecommunications and Disability Consumer Representation (TEDICORE)	Voting	Gunela Astbrink
Women With Disabilities Australia (WWDA)	Voting	Sue Salthouse

The Disability Council was chaired by Christopher Newell. Holly Raiche of Communications Alliance provided project management support.

Communications Alliance was formed in 2006 to provide a unified voice for the Australian communications industry and to lead it into the next generation of converging networks, technologies and services.

In pursuing its goals, Communications Alliance offers a forum for the industry to make coherent and constructive contributions to policy development and debate.

Communications Alliance seeks to facilitate open, effective and ethical competition between service providers while ensuring efficient, safe operation of networks, the provision of innovative services and the enhancement of consumer outcomes.

It is committed to the achievement of the policy objective of the *Telecommunications Act 1997* - the greatest practicable use of industry self-regulation without imposing undue financial and administrative burdens on industry.



**Published by:
COMMUNICATIONS
ALLIANCE LTD**

**Level 9
32 Walker Street
North Sydney
NSW 2060 Australia**

**Correspondence
PO Box 444
Milsons Point
NSW 1565**

**T 61 2 9959 9111
F 61 2 9954 6136
TTY 61 2 9923 1911
E info@commsalliance.com.au
www.commsalliance.com.au
ABN 56 078 026 507**

Care should be taken to ensure the material used is from the current version of the Standard or Industry Code and that it is updated whenever the Standard or Code is amended or revised. The number and date of the Standard or Code should therefore be clearly identified. If in doubt please contact Communications Alliance