

# A Comparative Analysis of Guidelines for Access by Disabled People to Digital Information Systems : Some Proposals for Simplification

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# Sources of Definitions of Disability

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- Epidemiological
- Administrative

Source: humanITy

# A Simplified Definition of Blindness and Partial Sight

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- A person is blind if, after correction, vision in the better eye is 3/60 or less; or if the field of vision is 15 degrees or less.
- A person is partially sighted if, after correction, vision in the better eye is 6/60 or less or if the field is substantially restricted.

*Source: Carey simplification of ICIDH80 (ref.1)*

# UK Functional Definition of Blindness and Partial Sight

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- A person is certified as blind if they are “so blind that they cannot do any work for which eyesight is essential”. (Less than 3/60 or a much contracted field of vision).
- A person can be certified as partially sighted if they are “substantially and permanently handicapped by defective vision caused by congenital defect or illness or injury”. (6/60 or less or gross field defect).

*Source: 1948 National Assistance Act (ref.2)*

# AIM 5.2

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	General	Cognitive	Physical	Audio	Visual
Fitness					
Accessibility					
Apprehension					
Transparency					
Navigation					
Interaction					
Expression					

For table content see Speech text pp 4 & 5

*Source: humanITy (ref.3)*

# Research-Based Web Design and Usability Guidelines

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## National Cancer Institute Top Ten

- Set and state goals
- Use an iterative design approach
- Evaluate websites before and after making changes
- Provide useful content
- Display information in a directly usable format
- Do not display unsolicited windows or graphics
- Do not use colour alone to convey information
- Design for common browsers
- Create a positive first impression of your site
- Ensure the homepage looks like a homepage

*Source: National Cancer Institute, USA (ref.4)*

# Nielsen's Heuristics

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- Visibility of System Status
- Match between system and real world
- Follow real world conventions
- User control and freedom
- Support undo and re-do
- Consistency and standards
- Error prevention
- Recognise not recall
- Tailor frequent actions
- Aesthetic minimalist design

*Source: Jacob Nielsen (ref.5)*

# Carey's Top Ten

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- Define taxonomy
- Use the (7 + or - 2) rule
- Enable cursor establishment from the keyboard
- Allow adjustability for print font, size etc for metadata as well as data
- Only use tables, frames for the purpose for which they were designed
- Allow exclusion of recurrent metadata
- Don't describe what you can link
- Balance aesthetics, purpose and end user requirements
- Do not slavishly digitise paper content
- Update or die.

*Source: humanITy (ref.6)*

# MyGuide User Requirement

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- Basic Customisable Features
- Radically Simple Interface
- Cross Platform
- Fit for Purpose
- Variable Navigation
- Ranking
- Portable Profiles
- Multi Modality
- Reading Age
- Voice In/Voice Out

*Source: humanITY (ref.7)*

# WAI Quick Tips

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- Images & animations: Use the alt attribute to describe the function of each visual.
- Image maps. Use the client-side map and text for hotspots.
- Multimedia. Provide captioning and transcripts of audio, and descriptions of video.
- Hypertext links. Use text that makes sense when read out of context. For example, avoid "click here."
- Page organization. Use headings, lists, and consistent structure. Use CSS for layout and style where possible.
- Graphs & charts. Summarize or use the longest attribute.
- Scripts, applets, & plug-ins. Provide alternative content in case active features are inaccessible or unsupported.
- Frames. Use the noframes element and meaningful titles.
- Tables. Make line-by-line reading sensible. Summarize.
- Check your work. Validate. Use tools, checklist, and guidelines at <http://www.w3.org/TR/>
- *Source: WAI (Web Accessibility Initiative) (ref.8)*

# DRC Table 6

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- Check Points accounting for most reported problems
- Text equivalent;
- Foreground/background;
- Usable with scripts, applets etc;
- Movement on pages;
- Spawning windows;
- Split blocks
- Identify target of link'
- Clear, simple language

*Source: DRC (Disability Rights Commission) (ref.9)*

# Guidelines for Learning and Cognitive Disabilities

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- Carey - 7+ or -2 Rule
- DRC - Clear, Simple Language
- MyGuide – Voice In/Voice Out
- NCI - Iterative Design Approach
- Nielsen - Match Between System and Real World
- Nielsen - Recognise Not Recall
- WAI - ... Consistent Structure

*Source: humanITy*

# DRC Table 1: Task success rate by impairment group

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Impairment Group	Tasks succeeded	Tasks failed
Blind	53%	47%
Partially sighted	76%	24%
Dyslexic	83%	17%
Physically impaired	85%	15%
Hearing impaired	85%	15%
All impairments	76%	24%

*Source: Disability Rights Commission (DRC) (Ref.9)*

# Accessibility Guidelines for Blind and Visually Impaired People

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- Carey - Enable Establishment of Cursor
- Carey - Adjustability Print, Font, Size
- Carey - Allow Exclusion of Recurrent Metadata
- DRC - Text Equivalent
- DRC - Foreground/Background
- DRC - Usable with Scripts, Aplets etc
- MyGuide - Multi Modal
- MyGuide – Voice Out
- NCI - Do Not Use Colour Alone To Convey Information
- WAI - Multimedia

*Source: humanITy*

# Disability Access Key Points

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- Learning/Cognitive – Clarity, Simplicity, Voice Out
- Physical - Enable selection through simple switches, Voice In
- Deaf - Captions
- Blind - Describe graphics, allow simplified access/customisation, Voice Out

*Source: humanITy*

# Simplified Disability Requirements

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- Enable simplicity and customisation
- Create multi modally and enable multi modal interaction

*Source: humanITY*

# General Design Rules

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- Consistency (NCI, Nielsen, WAI)
- Fit For Purpose, optional simplicity/customisation (Carey, MyGuide, NCI, Nielsen)
- Set/State Goals (NCI)
- User Control (Nielsen)
- User Evaluate (DRC, NCI)

*Source: humanITy*

# Combined Special and General Needs Guidelines

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- Consistency (NCI, Nielsen, WAI)
- Fit For Purpose, optional simplicity/customisation (Carey, MyGuide, NCI, Nielsen)
- Multi Modal (Carey, DRC, MyGuide, NCI, WAI)
- Set/State Goals (NCI)
- User Control (Nielsen)
- User Evaluate (DRC, NCI)

*Source: humanITy*



# Basic Accessibility Guidelines

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- Enable simplicity and customisation
- Create multi modally and enable multi modal interaction
- Enable channel and user interface choice

*Source: humanITy*

# Describing Graphics

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- Most graphics have captions
- Captions are useful in telephone access
- Many graphics have authored descriptions

*Source: humanITy*

# Information System Design Procedure

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- Market Analysis
- Legislative Analysis
- Integrate Multi Modality
- User Evaluation
- State Goals
- Allow Maximum User Control

*Source: humanITy*