ICT and Accessibility for Persons with Disabilities in South Africa

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Presentation Outline

● Disability Context in South Africa
● Meraka Institute
● Research Initiatives
  - South African National Accessibility Portal (NAP)
  - Ability Based Technology Intervention
  - Intelligent Room
  - South African Sign Language
● Other supporting initiatives
  - FOSS
  - W3C
Disability Context in South Africa

- SA 2001 census - between 5-12% of South Africans living with disabilities

- Persons with disabilities impacted by
  - Poverty
  - Unemployment
  - Education & training opportunities

- Many causes of disability
  - Violence & war, poverty, lack of information, failure of medical services, environmental factors and accidents
Meraka Institute

- Strategic ICT initiative from South African Government
- Institute within Council for Scientific and Industrial Research (CSIR)
- ICT as core research focus

Objectives:

- Facilitate National, Economic and Social Development through needs based ICT research, development, innovation and human capital development
Research Initiatives: National Accessibility Portal (NAP)

- 5 year needs based research, development and innovation initiative
- Address the information and communication needs of persons with disabilities
- Use ICT to empower persons with disabilities to live independently
- Inclusion, Accessibility & Language
  - Unique as it includes all different disabilities
  - Accessible Access to relevant information and services
  - Standards compliant (W3C, etc.)
  - Language support (all Indigenous languages including Sign Language)
National Accessibility Portal

- In partnership with South African Disability Sector and Government

- **Jointly** conceptualised initiative with OSDP in The Presidency, The Meraka Institute, CSIR and Disability Persons Organisations (DPOs: DeafSA, SANCBD, NCPPDSA, Quad-Para, ILC, SAFMH)

- Based on Internet technologies and uses open source software to provide affordable ICT technology

- 5 persons with disabilities part of the core NAP team
National Accessibility Portal

- Informed by:
  - Articles 9 & 21 of the UN Conventions on the rights of persons with disabilities,
  - Inclusive Education (White Paper No.6), National R&D Strategy,
  - DOC Medium term strategy map, strategic goal 9 (KFA5) – Contribute to the building of an inclusive information Society globally, DPO Workshops,
  - NEPAD Strategy,
  - Africa Decade of persons with Disabilities (1999 – 2009)
NAP Challenges

- Portal
  - Allowing for usability and accessibility on same interface
  - Operational & sustainability challenges, e.g. hosting
  - Useful statistics in terms of usage (audience, areas)
  - Building of user base
  - Relevant content

- Assistive Technologies
  - Distribution
  - Commercial partners
National Accessibility Portal

NAP Initiative
Use ICT to empower people to live independently

- Tokologo in Soweto,
- Optima College in Pretoria

NAP Centres (co-located)

Replicable methodology

Operational & Sustainability Models

NAP portal

- Interactive Voice Response
- SMS

R&D and Innovation

- Usability
- Accessibility
- Inclusive Education (e.g. maths for the blind)

Affordable Assistive ICT technologies

- GNApp
- Notetaker

meraka Institute

NATIONAL ACCESSIBILITY PORTAL
Change language

Note: Content not available in the preferred language will be shown in English

English
Afrikaans
IsiZulu
IsiNdebele
IsiXhosa
Seisheko
Seisotsho
Seiswana
Seisetswana
Seisereka

Return to last visited page
Older diabetics at risk of physical disabilities

Elderly people with diabetes may be at heightened risk of physical limitations that could hinder their independence, a new study suggests. British researchers found that among more than 800 adults age 60 or older, those with diabetes were more likely to have problems with walking and performing daily tasks like bathing, climbing stairs and dressing.

Elderly people with diabetes at risk of physical disability

2008/02/26

Overall, 48 percent of those with diabetes used some form of mobility aid, such as a cane or walker. That compared with 31 percent of men and women without diabetes. Furthermore, 4 percent of diabetics were “highly dependent” on someone else to care for them, whereas only 1 percent of those without diabetes were, the researchers report in the journal Diabetes Care.

http://www.sciencemag.org/article.cfm?id=older-diabetics-at-risk-p
SA Social grant spending increased

South Africa is to increase its disability and old age grants by R10 to R410 a month by April, and its child support grants by R10 in April and a further R10 in October to R220 a month.

Social grant spending to be increased

2009/10/27

The total number of South African grant beneficiaries is 12.4 million, and expenditure on social assistance will be R73.2 billion in 2008/09. The new increases are in line with the government's "year round" approach to tackling poverty in the country, announced by President Thabo Mbeki in his State of the Nation address earlier this month. The new approach will see various government departments working with non-governmental organisations and the business community to identify interventions targeting specific types of households and to implement them with urgency.

http://www.southafrica.info/news_info/a_glimpse_social_delivery_budget_2008_social-211220.htm

Show content relevance
Disability related information

KwaZulu-Natal

You can add additional content by using the content actions

KwaZulu-Natal has the following entries. Please choose an entry to view.

- **Association for Persons with Physical Disabilities (Chatsworth)**
  - This Association is affiliated to the National Association for persons with physical disabilities.

- **Association for Persons with Physical Disabilities (Phoenix)**
  - This Association is affiliated to the National Association for persons with physical disabilities.

- **Association for Persons with Physical Disabilities (Pietermaritzburg)**
  - This Association is affiliated to the National Association for persons with physical disabilities.

- **KZN Cerebral Palsy Association**
  - Provincial Association affiliated to the NAP CP* rendering services to persons with cerebral palsy at grass roots level
  - Pietermaritzburg and District Cerebral Palsy Association
  - Provincial Association affiliated to the NAP CP* rendering services to persons with cerebral palsy at grass roots level
Disability related information

Gauteng

Tshwane Deaf Association

Association for the Deaf in Tshwane

Contact information

Contact person:
The Director

Telephone number:
012 304 0960

Fax number:
012 825 9641

Email:
gda@tshwane.net

Postal address:
PO Box 4093 Arcadia
0007

Physical address:
501 Barberton Street Arcadia
0000

Show contact information
NAP Portal: Assistive Technologies – GNApp

- Assistive technology for quadriplegic and those who cannot speak
- Use pictures to construct sentence
- Voice reads out the sentence
- Localised for our environment
  - Culture specific pictures
  - Many South African languages
- Open source alternative to expensive imported applications
NAP Portal: Assitive Technologies – GNApp
NAP Portal: Assistive Technologies – Notetaker

- Portable information device for visually impaired people
- Inbuilt speech technologies

Functionality:
- Email
- Calculator
- Audio books (DAISY)
- Web
Research Initiatives: Ability Based Technology Intervention

- Research into technology interventions to facilitate training based on:
  - Abilities, Learning styles, Literacy levels, Language
  - Multiple modalities (fusion and fission)
  - Smart Reasoning Engine (to facilitate the most appropriate configuration of modalities and interface)
  - Adaptive interfaces
  - Optimised content delivery and dialogue
Research Initiatives: Intelligent Enabled Room

- Research into establishment of a smart / intelligent room
  - Sense (distributed sensors, devices)
  - Process
  - Adapt (intelligent decision making)
  - Interact (multiple modes/modalities)
  - Human Factors

- Focus:
  - Profiling and context awareness
  - Hardware, software, physical environment connectivity and integration
Intelligent Enabled Room

- Has 5 main research themes:
  - Human Factors
    - Ethics, social and user centric design issues
  - Awareness
    - Sensing through multiple modalities
  - Intelligence
    - Optimised decision making
  - Enablers
  - Software Engineering
    - Methodologies in a Developing world context
Research Initiatives: South African Sign Language

- Research into:
  - Enhanced web experience for Sign Language users
  - Digital video technologies as applied to Sign Language
  - Modelling and documentation of South African Sign Language

- Hosts Thibologa Sign Language Institution
  - Provides on-line Sign Language Training
  - Introductory books & courses on Sign Language
Other supporting initiatives

- Free and Open Source Software (FOSS)
  - South African Government adopted a policy and strategy to implement FOSS

- World Wide Web Consortium (W3C)
  - Meraka hosts Southern Africa W3C office
  - W3C develops interoperable technologies for
    - Specifications
    - Guidelines
    - Software
    - Tools
Thank you!

Questions?

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