

Design for all in IT Solutions and Services

The Siemens Approach to Design for All

EUROPEAN CONFERENCE EDeAN 2008
Training in Design for All: Innovative Experiences
June 13, 2008

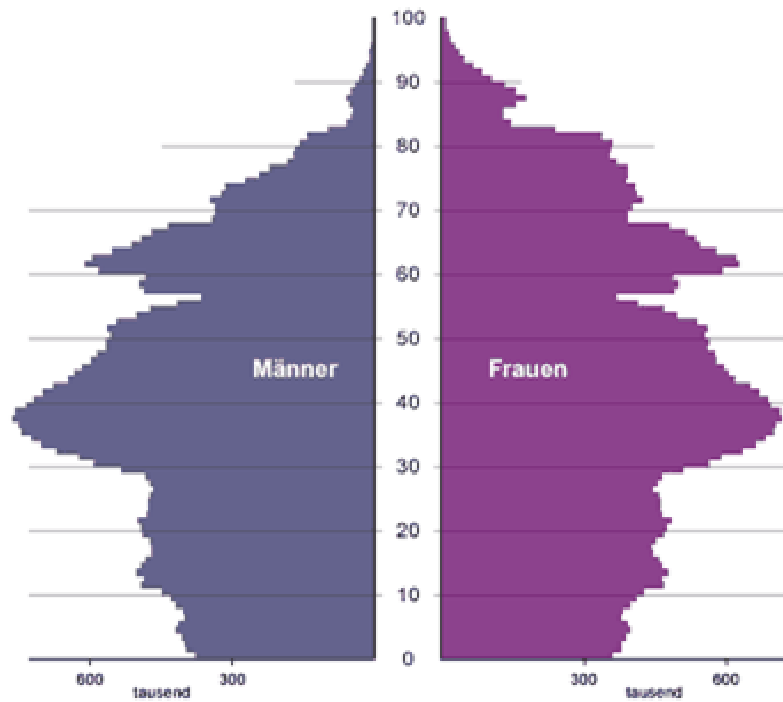
Siemens Accessibility Competence Center
Klaus-Peter Wegge

*"I have always wished for my computer
to be as easy to use as my telephone;
my wish has come true
because I can no longer figure out
how to use my telephone"*

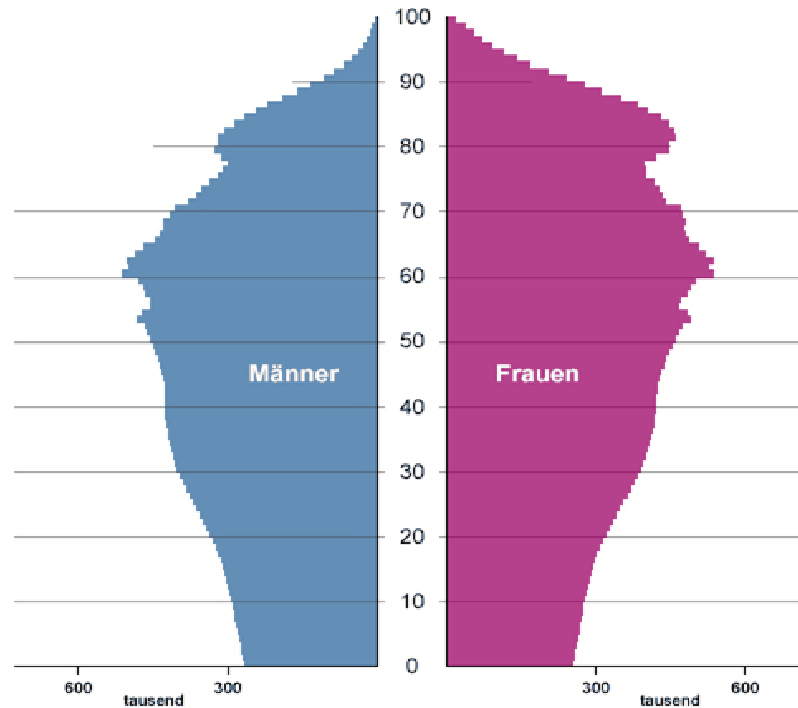
Bjarne Stroustrup

The Double Aging Effect

2001 Germany

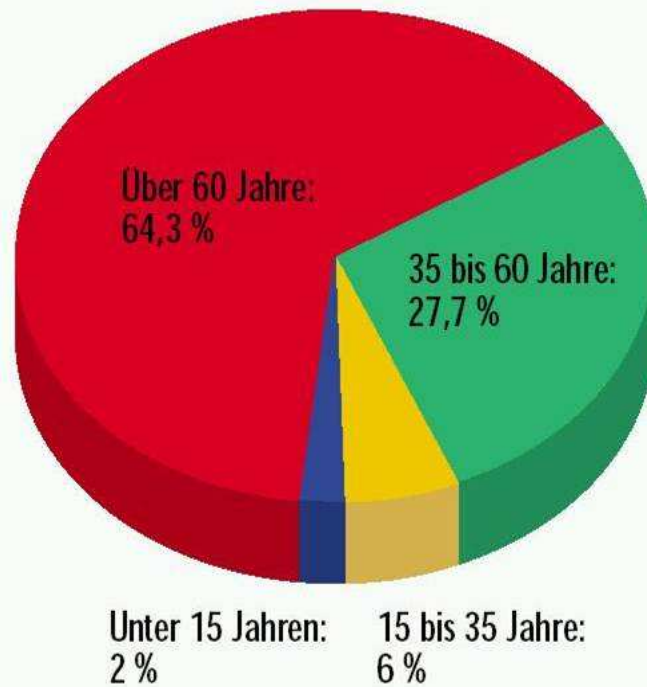


2050 Germany



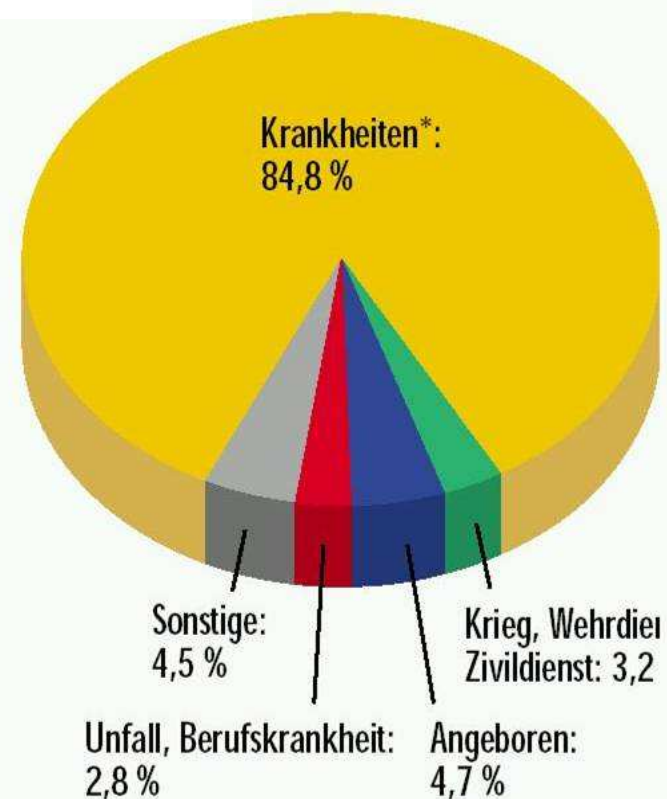
Age Groups and Causes for Impairment

Age Groups



Quelle: Statistisches Bundesamt, 1997

Causes



Most Impairments are caused by Diseases or Injuries.

Customer Groups

Consumers

- Household appliances
 - Cordless and Mobile phones
 - Navigation systems
- } Design for All (DfA)

Public authorities & Service Providers

- ICT (Internet, Software, ATM)
 - Public transport
- } Accessibility

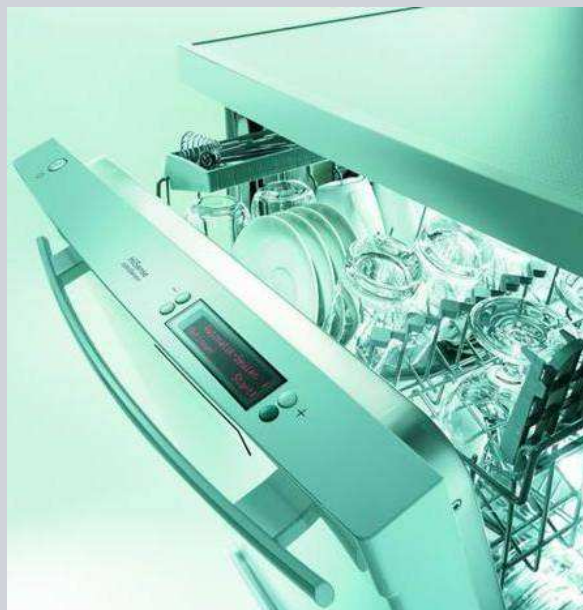
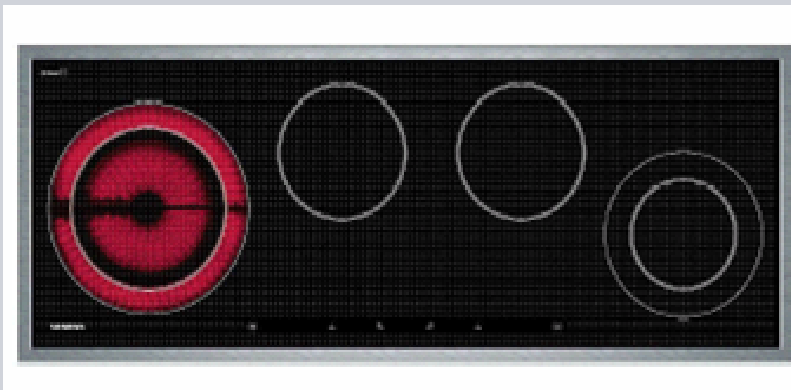
People with special needs

- Hearing aids
 - Input and output devices
- } Assistive Technology

Specialists

- Medical devices
- Workplaces

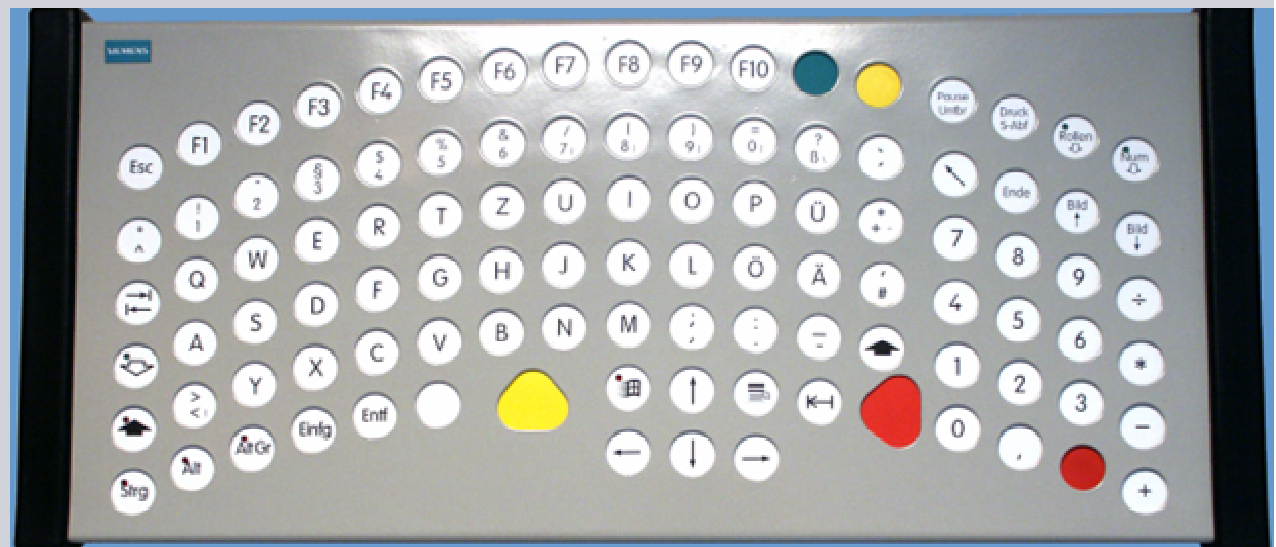
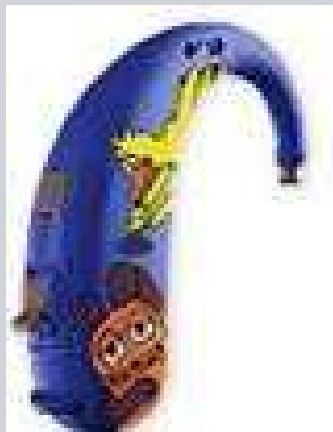
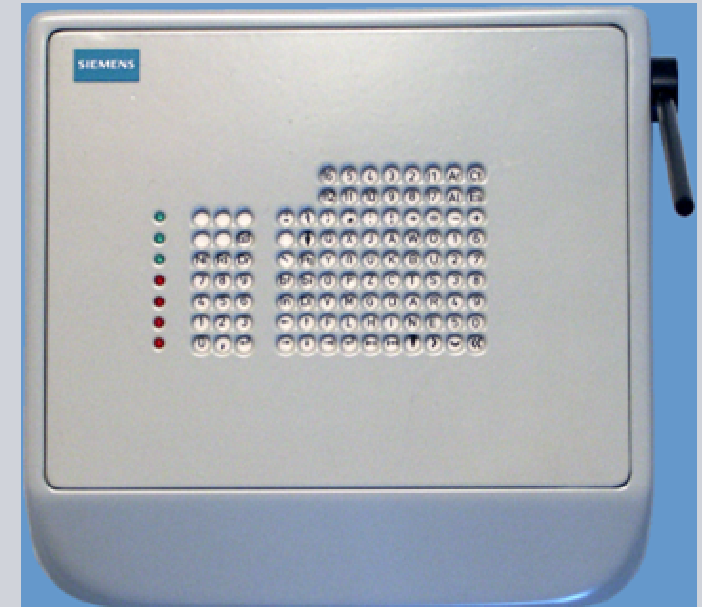
Consumers



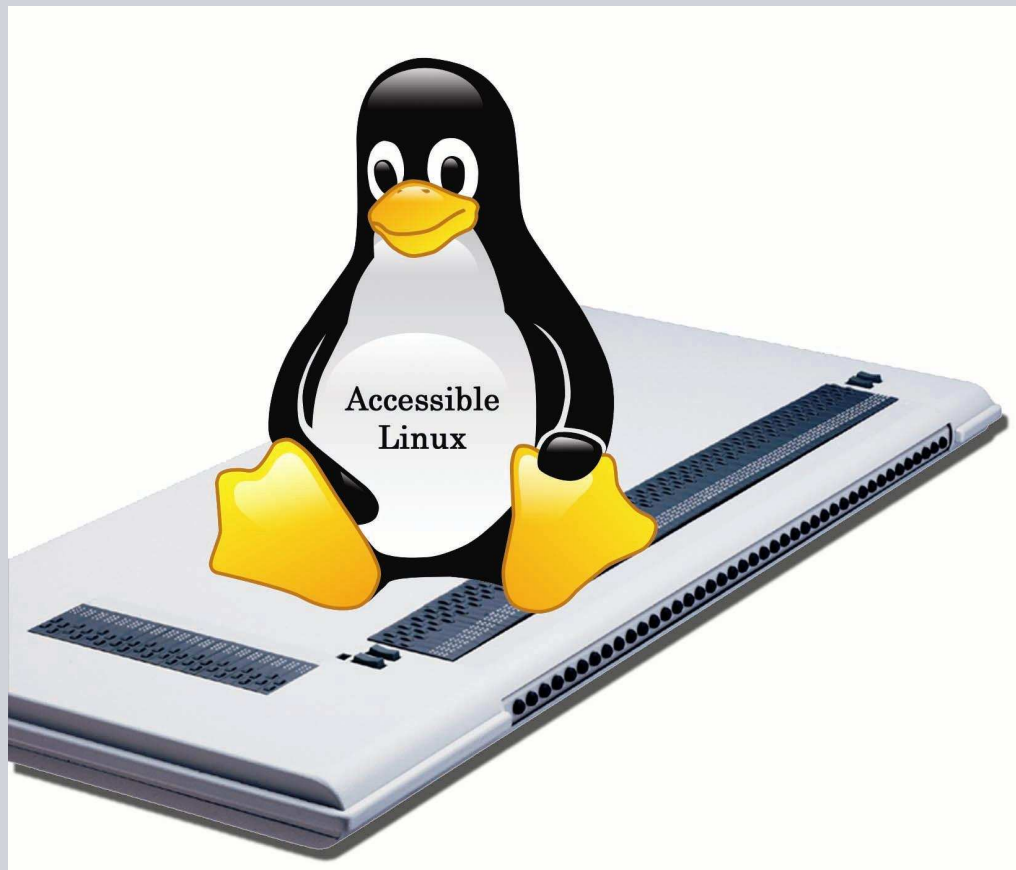
Public Authorities & Service Providers



People with special needs



Accessible Workplaces



CCTV
Brailledisplay

Definitions of Design for All

- **Accessible design:** “Design focussed on principles of extending standard design to people with some type of performance limitation to **maximize the number of potential customers** who can readily use a product, building or service.”

(ISO/IEC Guide 71)

- **There are three main strategies for DfA:**
 - design for most users without modifications,
 - design for easy adaptation to different users
 - design with a view to connect seamlessly to assistive devices.

(European Commission)

Design for All Examples



The SIEMENS Accessibility Competence Center

- **Participation in the early design process**
- **In-house evaluation and training**
- **Accessibility engineers**
- **Specialists with different types of impairments**
- **Learning from users:**
 - **Exhibitions and conferences**
 - **Participation in R&D-Projects**
 - **Cooperation with organisations of disabled persons & providers of assistive technology**

Implementation of DfA

- **Siemens Corporate Statement on Disability Access and Design for All / Universal Design**
- **Internal coordination and information exchange**
- **Contact partner to regulators and industry associations**
- **Contribution to Accessibility standardisation (ISO, CEN/CENELEC, ...)**
- **Handling of inquiries**

New ideas for innovative solutions



Older People as Consumers

- Older people are a non-homogeneous user group!
- Information of consumers, resellers and architects are required
- Installation and configuration is crucial for usability
- Special briefing, training and instruction materials are necessary
- Who makes the buying decision for whom?

The *usability* of a product is perceived very individually due to age, experience, training or type and degree of impairment.

People with impairments as Consumers

- People with impairments are a non-homogeneous user group!
- Information of consumers, resellers and providers of assistive technologies are required
- Installation and configuration is crucial for accessibility
- Special briefing, training and instruction materials are necessary

The *accessibility* of a product is perceived very individually due to age, experience, training or type and degree of impairment.

Advancing Design for All

Requirements of elderly people and people with different types of impairments are nearly the same in all countries, and companies are producing for a global market, but:

- incompatible definitions and terms
- different national regulation
- inconsistent (national) standards
- contradictory guidelines
- contradictory user requirements



Principles and Challenges

- No disadvantages to users
- No discrimination against or stigmatization of users
- What is readily achievable or reasonable?
- Who pays for Design for All/accessibility?
- Is accessibility a yes/no decision?
- Self declaration versus (third party) certification
- Who will benefit from accessibility labeling?

Cordless Phone Gigaset E150

- Extra large font / keys
- SOS-key
- Announcement of the caller ID by speech
- Optical and acoustic signals
- Answering machine with speech output
- Headset plug
- Easy operation



Cordless Phone Gigaset E365

- Second Generation Product



Mandat 376 of the European Commission

„STANDARDISATION MANDATE TO CEN, CENELEC AND ETSI IN SUPPORT OF EUROPEAN ACCESSIBILITY REQUIREMENTS FOR PUBLIC PROCUREMENT OF PRODUCTS AND SERVICES IN THE ICT DOMAIN“

Objectives:

- **to harmonise and facilitate the public procurement of accessible ICT products and services by identifying a set of functional European accessibility requirements for public procurement of products and services in the ICT domain, and**
- **to provide a mechanism through which the public procurers have access to an electronic toolkit, enabling them to make use of these harmonised requirements in procurement process.**

Working on Mandate 376

WG of ESOs:

- **CEN/BT WG 185 "eAccessibility" (Secr. AENOR)**
- **CENELEC/BT WG 101-5 "Usability and safety of electrical products with reference to people with special needs" (Secr. AENOR)**
- **ETSI HF (Human Factors) STF 333**
- **5 experts in joint CEN/CENELEC project team**

Mandate 376 Phase I

Inventory of European and international accessibility requirements and assessment of suitable testing and conformity schemes

Results:

- 1a) An inventory of ICT products and services**
 - 1b) A list of functional accessibility requirements**
 - 1c) Identification of gaps where no accessibility requirements exist**
 - 1d) A list of existing standards**
 - 1e) A proposal for the development of requirements and award criteria**
-
- 2) Report on analysis on testing and conformity schemes of products and services meeting accessibility requirements**

References

- European Commission: Mandate 376:
http://ec.europa.eu/information_society/policy/accessibility/deploy/pubproc/eso-m376/index_en.htm
- ETSI Technical Report ETSI DTR 102 612:
“Human Factors (HF); European accessibility requirements for public procurement of products and services in the ICT domain“
http://portal.etsi.org/stfs/STF_HomePages/STF333/STF333.asp
- CEN Report:
“Analysis on testing and conformance schemes of products and services meeting accessibility requirements“
<http://www.econformance.eu/euconformancereport.html>
- EICTA:
“White paper on eAccessibility“
http://www.eicta.org/fileadmin/user_upload/document/document1166614008.pdf
- EICTA:
“Accessibility Best Practice Booklet“
<http://www.eicta.org/web/news/telecharger.php?iddoc=627>

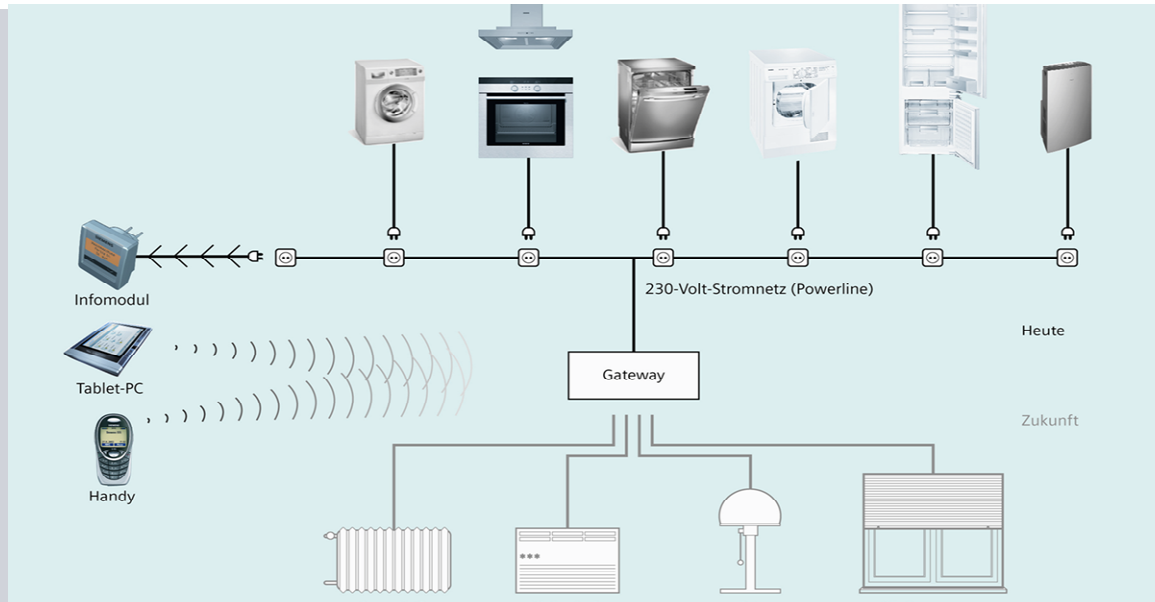
Mandate 376 Phase II

Standardisation activities

Results:

- 1) European standard on accessibility requirements for ICT products and services**
- 2) A list of applicable standards**
- 3) Guidelines on accessibility award criteria usable in the procurement of ICT products and services**
- 4) Guidance and support material for public procurements**
- 5) An online, accessible toolkit**

Technologies are growing together



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