Standards and Guidelines

Standards are important

- They provide
  - a consistent benchmark to help design teams avoid annoying user interface inconsistencies – different print icons
  - independent and authoritative guidance – there are many conflicting views on HCI
  - Prioritise user interface issues. Many organisations pay little regard to research findings but few can afford to ignore standards.
  - Help organisations to fulfil their legal obligations
    - Disability legislation and health and safety puts legal obligations on service providers to ensure systems are fit for purpose and meet minimum ergonomic requirements.

ISO 9241-210:2010 Ergonomics of human-system interaction -- Part 210: Human-centred design for interactive systems

A standard established by the International Standards Organization for how user research should be involved in designing products. The standard specifies an iterative cycle of these 4 activities:

- specify the context of use
- specify the user and organizational requirements
- produce design solutions
- evaluate designs against requirements

The standard describes four principles of human-centred design:

- Active involvement of customers
  - (or those who speak for them).
- Appropriate allocation of function
  - (making sure human skill is used properly).
- Iteration of design solutions
  - (therefore allow time in project planning).
- Multi-disciplinary design
  - (but beware overly large design teams).

...

And four key human-centred design activities

- Understand and specify the context of use
  (make it explicit – avoid assuming it is obvious).
- Specify user and socio-cultural requirements
  (note there will be a variety of different viewpoints and individuality).
- Produce design solutions
  (note plural, multiple designs encourage creativity).
- Evaluate designs against requirements
  (involves real customer testing not just convincing demonstrations).

ISO 9241
Accessibility for ICT equipment

Includes hardware and software. ISO 9241 definition of this is vague but includes mobile devices, computers and software. It promotes four key steps

- Understand and specify context of use paying particular attention to the variation of user characteristics and the impact of task, equipment and environmental characteristics that affect accessibility.
- Specify the user requirements for accessibility
- Produce design solutions paying attention to accessibility
- Evaluate accessibility design solutions of ICT equipment and services with targeted uses group.

ISO 9241 - Web Interfaces

The ISO 9241 standard applies to designing websites and covers five areas.

1. High-level design decisions and design strategy
   - What is purpose and how do users know this?
   - Who are the users and what are their goals?

2. Content design
   - What is site's conceptual model?
   - What is the information architecture design?
   - How do they deal with privacy and personalisation

Web Interfaces

3. Navigation and Search
   - How should the content be organised?
   - How will users search the content?
4. Content presentation
   - How should pages be designed to enable users to make use of the information therein
   - How should the links be designed
5. General design aspects
   - How do you design for Internationalisation?
   - How should you provide help?
   - What download times are acceptable?

Usability Guidelines

- Guidelines are important because they provide guidance on how to enhance the software so that the user has a more pleasurable experience

- Web accessibility guidelines
  http://www.w3.org/WAI/intro/accessibility

- Games accessibility
  http://game-accessibility.com/

Web Accessibility Standard

- **ISO/IEC 40500!**
- 1 Perceivable
  - 1.1 Provide text alternatives for any non-text content
  - 1.2 Provide alternatives for time-based media.
  - 1.3 Create content that can be presented in different ways (for example simpler layout) without losing information or structure.
  - 1.4 Make it easier for users to see and hear content including separating foreground from background.
- 2 Operable
  - 2.1 Make all functionality available from a keyboard.
  - 2.2 Provide users enough time to read and use content.
  - 2.3 Do not design content in a way that is known to cause seizures.
  - 2.4 Provide ways to help users navigate, find content, and determine where they are.

Web Accessibility Standard Cont/d

- 3 Understandable
  - 3.1 Make text content readable and understandable.
  - 3.2 Make Web pages appear and operate in predictable ways.
  - 3.3 Help users avoid and correct mistakes.
- 4 Robust
  - 4.1 Maximize compatibility with current and future user agents, including assistive technologies.

Phone/Tablet Guidelines

- Android developers' guidelines
- Apple's guidelines are here
- Microsoft inductive guidelines are here
- Web Accessibility mobile devices
- Draft BBC mobile accessibility guidelines
- Games accessibility and here

What have we covered?

- We have looked at the:
- Standards and Guidelines that inform the development process.
- Accessibility issues which also have social and possibility ethical issues.