What is usability?

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Usability - Usable

- What do we mean?
- For who?
- Absolute or relative?
What does it mean that something is usable?

Satisfactory
Simple
Learnable
Forgiving
Nice
Efficient
Inspiring
Self-explanatory

Doesn’t require a manual
Neat design
Intuitive
A total experience

Anyone can use it
Effective

Grandma can use it!
Immediate
ISO 9241:

Definition of usability:

"The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use"
Usability is contextual

- What is “contextual”?
- Usability must always be related to
  - a specific product
  - specified users
  - specified goals
    - with effectiveness, efficiency and satisfaction
  - specified context of use
Usability cont.

- Product
- Users
- Context
IT in professional work

To use computers and technology in a work environment .....
Complex systems
Efficiency, safety, comfort
In a spaceship
Products and systems

Everywhere...
For everybody.....
Stand up!

- Going by taxi from the city to the airport takes about 1 hour
- Latest check-in is 1 hour before departure

- You may sit when you know at what time the taxi should pick me up at the hotel?
Välj belopp eller kontouppgift.

Använd snabbvalstangenter eller siffertangentbordet och tryck på "KLAR".

2000
3000
5000
Konto-uppgift
Although the Democrats are listed second in the column on the left, they are the third hole on the ballot.

Punching the second hole casts a vote for the Reform Party.

WRITE IN CANDIDATE
To vote for a write in candidate, follow the directions on the long stub of your ballot card.
Is IT useful and efficient?

- Are there problems? - Yes
- What are the problems? - Many
- How to build better IT, information systems, computer tools?
How to make things usable?

- Knowledge, understanding....
- Design – for usability
- Processes – how things are made
Design for usability?
Design for usability?
Design for usability?
Design for usability?
Design for usability?
The process

- Usability is for users
- Users must be involved in the process
  - Why?
  - How?
- We must have a user centred process to build usable systems!
- -> This course!
ISO 9241:

Definition of usability:

"The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use"
Usability according to ISO 9241-11

- **Usability** – "The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use."

- **Effectiveness** – "accuracy and completeness with which users achieve specified goals."

- **Efficiency** – "resources expended in relation to the accuracy and completeness with which users achieve goals."

- **Satisfaction** – "freedom from discomfort, and positive attitudes to the use of the product."

- **Context of use** – "users, tasks, equipment (hardware, software and materials), and the physical and social environments in which a product is used"
Usability according to Jacob Nielsen (1993)

- **Easy to learn**: In order for the user to quickly get on with his/her work.

- **Efficient to use**: Once the user has learned to use the system it must be efficient to work with.

- **Easy to remember**: It should be possible to return to the system after a period of absence and still remember how it works.

- **Few errors**: The user should do as few errors as possible. If errors are made it must be possible to easily recover and get back to the situation where the user was before the error occurred.

- **Subjectively pleasing**: The user should feel good about using the system, like to work with it.
## Measures of usability in ISO 9241-11

<table>
<thead>
<tr>
<th>Usability objective</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall usability</td>
<td>Percentage of goals achieved.</td>
<td>Time to complete a task.</td>
<td>Rating scale for satisfaction.</td>
</tr>
<tr>
<td></td>
<td>Percentage of users successfully completing task.</td>
<td>Tasks completed per unit time.</td>
<td>Frequency of discretionary use.</td>
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<tr>
<td></td>
<td>Average accuracy of completed tasks.</td>
<td>Monetary cost of performing the task.</td>
<td>Frequency of complaints.</td>
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</tbody>
</table>
Usability is....

- A necessity for a good work situation
  - Quality
  - Efficiency
- To have control over the work situation
- Work environment
- Satisfaction
- Wellbeing and health
Usability is not (only)

- "User friendly"
- Surface, interface
- Performance
- Luxury
- Cosmetics
- Something to add afterwards
- Something we can avoid