What is usability?

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Usability - Usable

- What do we mean?
- For who?
- Absolute or relative?

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What does it mean that something is usable?

Simple

Satisfactory

Learnable

Forgiving

Nice

Easy to learn

Inexpensive

Efficient

Error preventing

Inspiring

Useful

Self explanatory

Doesn't require a manual

Intuitive

Neat design

Anyone can use it

Effective

A total experience

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*

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Usability cont.

- Product
- Users
- Context

IT in professional work

To use computers and technology in a work environment .....

Complex systems

Efficiency, safety, comfort

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In a spaceship
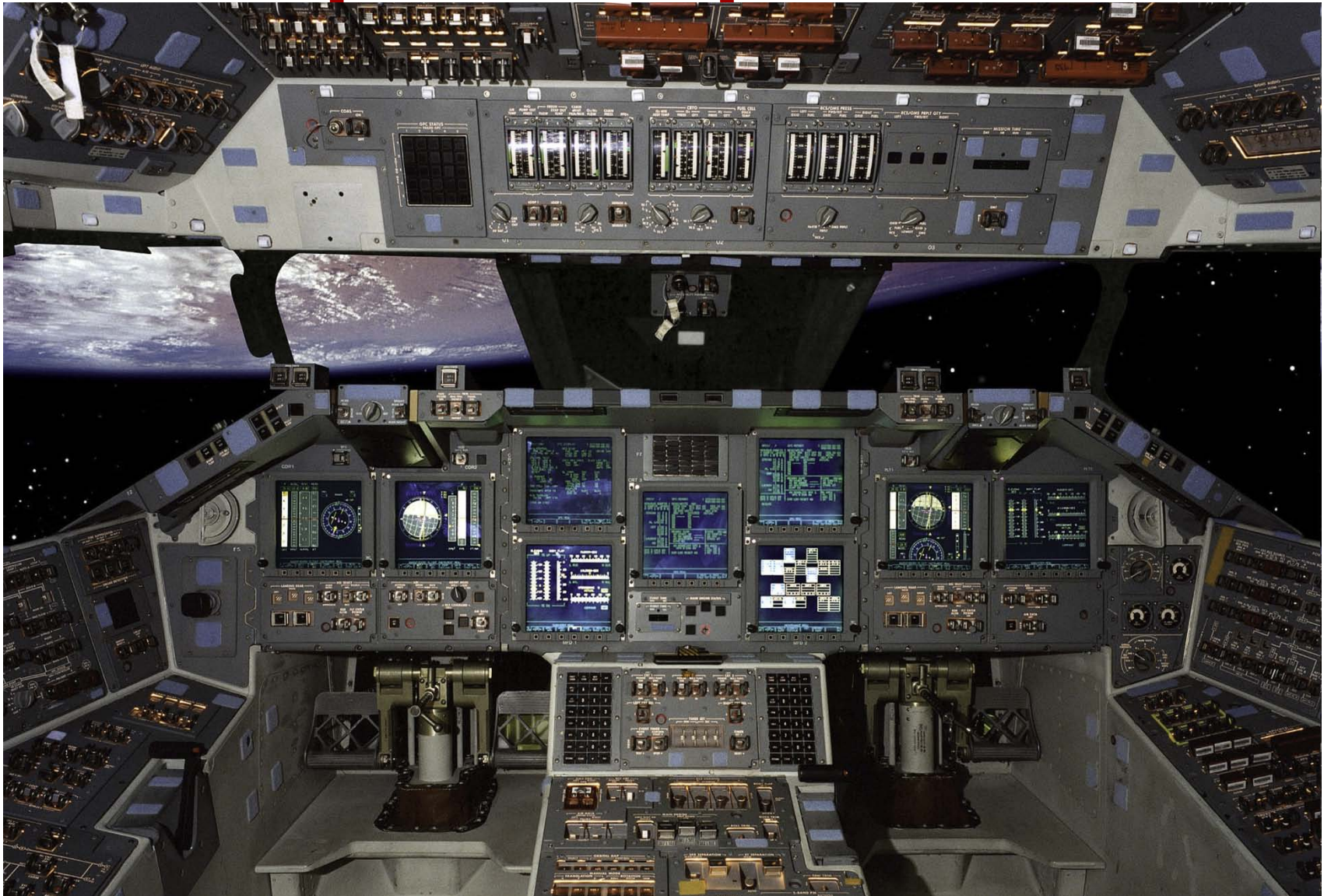
Products and systems

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?

2000

3000

5000

Konto-
uppgift

Välj belopp eller
kontouppgift.

Använd snabbvalstangenter eller
siffertangentbordet och tryck på
"KLAR".

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.

(REPUBLICAN)
GEORGE W. BUSH - PRESIDENT
DICK CHENEY - VICE PRESIDENT
3 →

(DEMOCRATIC)
AL GORE - PRESIDENT
JOE LIEBERMAN - VICE PRESIDENT
5 →

(LIBERTARIAN)
HARRY BROWNE - PRESIDENT
ART OLIVIER - VICE PRESIDENT
7 →

(GREEN)
RALPH NADER - PRESIDENT
WINONA LaDUKE - VICE PRESIDENT
9 →

(SOCIALIST WORKERS)
JAMES HARRIS - PRESIDENT
MARGARET TROWE - VICE PRESIDENT
11 →

(NATURAL LAW)
JOHN HAGELIN - PRESIDENT
NAT GOLDHABER - VICE PRESIDENT
13 →

← 4
(REFORM)
PAT BUCHANAN - PRESIDENT
EZOLA FOSTER - VICE PRESIDENT

← 6
(SOCIALIST)
DAVID McREYNOLDS - PRESIDENT
MARY CAL HOLLIS - VICE PRESIDENT

← 8
(CONSTITUTION)
HOWARD PHILLIPS - PRESIDENT
J. CURTIS FRAZIER - VICE PRESIDENT

← 10
(WORKERS WORLD)
MONICA MOOREHEAD - PRESIDENT
GLORIA La RIVA - VICE PRESIDENT

WRITE-IN CANDIDATE
To vote for a write-in candidate, follow the directions on the long stub of your ballot card.

Sun-Sentinel graphic/Daniel Niblock

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?

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thisisbroken.com

Design for usability?
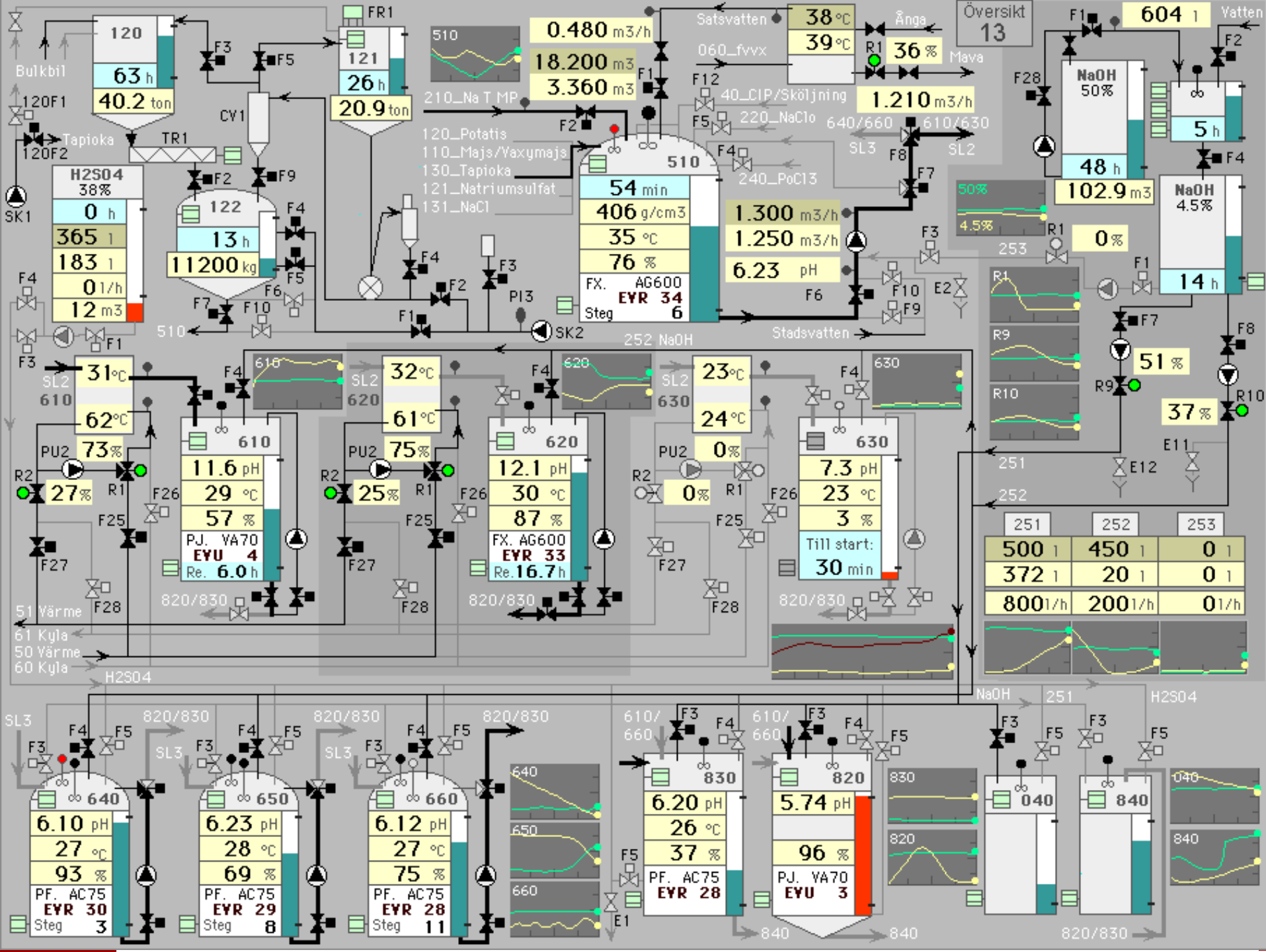
Design for usability?

Design for usability?

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Design for usability?

120 — 63 h — 40.2 ton
120F1
120F2 — Tapioka
Bulkbil

CV1
TR1

FR1
121 — 26 h — 20.9 ton

122 — 13 h — 11200 kg

H2SO4 38%
0 h
365 l
183 l
0 l/h
12 m3
SK1

510
0.480 m3/h
18.200 m3
3.360 m3
210_Na T MP

Satsvatten — 38 °C — 39 °C
060_fvvx
R1 36 % — Ånga — Mava

40_CIP/Sköljning — 1.210 m3/h
220_NaClo
240_PoCl3

120_Potatis
110_Majs/Vaxymajs
130_Tapioka
121_Natriumsulfat
131_NaCl

510
54 min
406 g/cm3
35 °C
76 %
FX. AG600
EYR 34
Steg 6

640/660 — 610/630
SL3 — SL2
F8 — F7
F6

1.300 m3/h
1.250 m3/h
6.23 pH

Stadsvatten

252 NaOH
SK2

604 l — Vatten
NaOH 50%
48 h
102.9 m3

NaOH 4.5%
5 h
14 h

50% — 4.5% — 253 — R1 — 0%

R1
R9
R10

51 % — R9 — 37 % — R10
E11
E12

610 — SL2 — 31 °C — 62 °C
PU2 73%
R2 27% — R1
610
11.6 pH
29 °C
57 %
PJ. VA70
EYU 4
Re. 6.0 h

620 — SL2 — 32 °C — 61 °C
PU2 75%
R2 25% — R1
620
12.1 pH
30 °C
87 %
FX. AG600
EYR 33
Re.16.7 h

630 — SL2 — 23 °C — 24 °C
PU2 0%
R2 0% — R1
630
7.3 pH
23 °C
3 %
Till start:
30 min

	251	252	253
	500 l	450 l	0 l
	372 l	20 l	0 l
	800 l/h	200 l/h	0 l/h

251
252

51 Värme
61 Kyla
50 Värme
60 Kyla

H2SO4
SL3 — 820/830 — 820/830 — 820/830
NaOH — 251 — H2SO4

640
6.10 pH
27 °C
93 %
PF. AC75
EYR 30
Steg 3

650
6.23 pH
28 °C
69 %
PF. AC75
EYR 29
Steg 8

660
6.12 pH
27 °C
75 %
PF. AC75
EYR 28
Steg 11

640
650
660

610/660 — 610/660

830
6.20 pH
26 °C
37 %
PF. AC75
EYR 28

820
5.74 pH
96 %
PJ. VA70
EYU 3

830
820

040
840
040
840

820/830
840

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

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

Usability is….

- A necessity for a good work situation
    - Quality
    - Efficiency
- To have control over the work situation
- Work environment
- Satisfaction
- Wellbeing and health

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Usability is not (only)

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

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