HUMAN COMPUTER INTERACTION

OHT 1

Dorman = Things should be designed in a way that manuals are not needed.

HCI:-

Concerned with the design, evaluation and implimentation of computer system along with the interaction between human and computer.

Donald interaction Method

1) User establish a goal
2) Formulate intention
3) specify action on interface
4) execute action
5) Percieve system state
6) interpret system state
7) evaluate

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3 'Use'

Useful :- Accomplish what is required

Useable :- do it easily and naturally

Used :- make people want to use it

Usability Goals

1) Effectivness

How good the system is at doing what it is supposed to do

2) Efficient :-

The way system supports its user

3) Safety :-

Safe from hazards

4) Utility :-

Providing features to do task

5) Learnability :-

How easy to learn

6) Memorability :-

How easy to memorize

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Cognition:-

Process by which we become familiar with processes or applications.

Experimental, Reflective, External,

Memory

Sensory
↓
iconic
echoic
hepatic

Short term
=> Fast access
x < 70ms
=> Forgetting
x ~ 200ms
=> less capacity
7 +/- 2 chunks

Long
slow access
x < 1/10 s
=> forgetting is slower
=> huge capacity
⇓
episodic
personal experience
semantic
facts

interferance
⇓
1 radioactive
new replace old
2 proactive
old interfare with new

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Design Principles

1) Visibility
   Can i see
2) Feedback
   what is going on
3) Affordance
   how do i use it
4) Mapping
   Drawing pictures or placing icons
5) Constraints
   what i cant do
6) Consistence
   same as old
a) aesthetic
   logo, style
b) internal
   within app
c) external
   with other apps
d) Functional
   symbols commonly used
   red - danger

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4 Golden Rules

1) Where you are
2) What you are doing
3) Where you can go
4) Where you have been

Screen Design And Layout

1) Grouping
2) Ordering of items
3) decoration
4) alignment
5) white space

Design Basics

1) Design
2) Design Process
3) User
4) Scenarios
5) Navigation
6) iteration & prototypes

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Interaction Types

1) Instructing
2) Conversing
3) Manipulating
4) Exploring

Interfaces

1) Command Based
2) WIMP & GUI

Menu

=> Flat menu
=> Expanding / Cascading
=> Contextual menu

Requirment

1) Questionaire
2) Interview
3) Workshop / Focus Group
4) Naturalistic Observation
5) Studying Documentation

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8 Golden Rules

1) Strive for consistency
2) User shortcuts
3) informative feedback
4) Design dialog to yield closure
5) Error prevention
6) Easy reversal of actions
7) Internal Locus of Control
8) Reduce Short term Memory load.

Error

a) precise
b) no technical detail
c) polite
d) constructive help

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