软件交互设计

基本概念、设计目标、设计原理、设计过程

可用性 (usability)





Usability means easy to learn, effective to use and provide an enjoyable experience





Human Factors

• 人机工程 Ergonomics: fitting to the physical body



One hand operation?

- Visibility?
- Icon size and arrangement?





Human Factors

• 人机工程 Ergonomics: fitting to the physical body

交互感知 Perception: sensing the world

Physical: vision, sound, touch

Chemical: smell, taste, pain

Vision

Frequency: 100ms

Discrimination: ~10⁴ Colors

• Remember: < 10² Colors







Human Factors

• 人机工程 Ergonomics: fitting to the physical body

交互感知 Perception: sensing the world

• 交互认知 Cognition: attention to the world

Properties	Conscious 意识	Unconscious 潜意识
Engaged by	Novelty Emergencies Danger	Repetition Expected Events Safety
Used in	New Circumstances	Routine situations
Can handle	Decisions	Nonbranching tasks
Accepts	Logical propositions	Logic or inconsistencies
Operates	Sequentially	Simultaneously
Controls	Volition	Habits
Capacity	Tiny	Huge
Persists for	Tenths of seconds	Decades (lifelong)



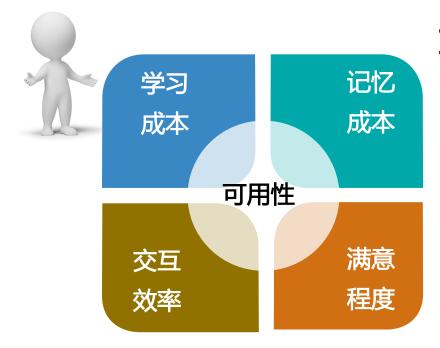
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ISO 9241 (可用性标准) 定义用户完成任务时的

- effectiveness
 - can you achieve what you want to?
- efficiency
 - can you do it without wasting effort?
- satisfaction
 - do you enjoy the process?

参考此类规范、根据软件任务,建立交互设计规则和启发式评测框架

- · ID的目标和验证评测依据
- 规则(Principles)及其度量