软件交互设计

基本概念、设计目标、**设计原理**、设计过程
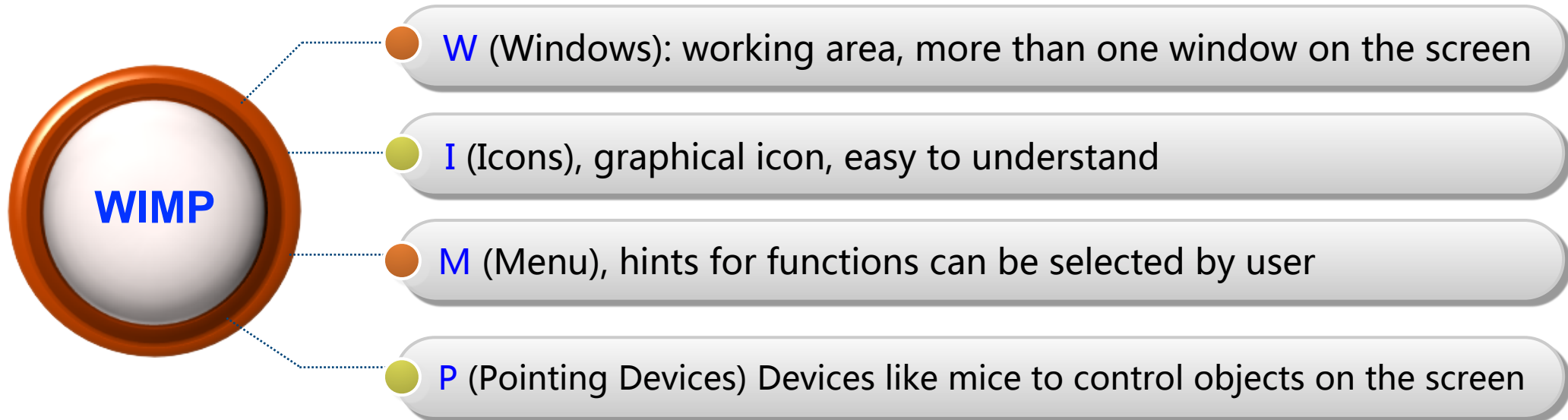
GUI设计规则、KLM效率模型、Fitts定律

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GUI设计规则

GUI allows user direct manipulating the objects on the screen, for example, pointing, dragging, deleting, rotating, enlarging, etc. Visual feedback will appear in real time: What You See Is What You Get (WYSIWYG)

GUI (Graphical User Interface) elements：WIMP

WIMP

W (Windows): working area, more than one window on the screen

I (Icons), graphical icon, easy to understand

M (Menu), hints for functions can be selected by user

P (Pointing Devices) Devices like mice to control objects on the screen

GUI：DM，WYSIWYG，WIMP

可视化 Visibility

一致性Consistency

直接映射Mapping

有效反馈Feedback

Design Principles

GUI：DM，WYSIWYG，WIMP

Be visible，WYSIWYG

人类信息来源 80%以上通过视觉获取

屏幕元素的选择、布局、呈现及装饰

繁多、分散的设计规则之下：视觉认知原理

GUI设计规则：可视化

Gestalt Theory (格式塔理论，完形心理学，德文Gestalt)
发现和解释了人类视觉认知活动中的整体性；视场内元素的关系

闭合律 law of closure

连续律 law of continuity

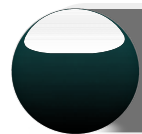相似律 law of similarity

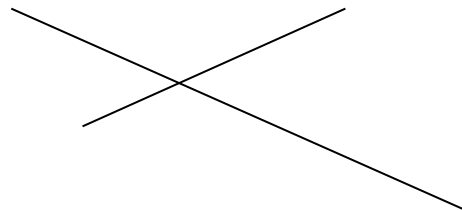接近律 law of proximity

对称律 law of symmetry

前背景 Figure-ground

GUI设计规则：可视化

闭合律 law of closure

连续律 law of continuity

相似律 law of similarity
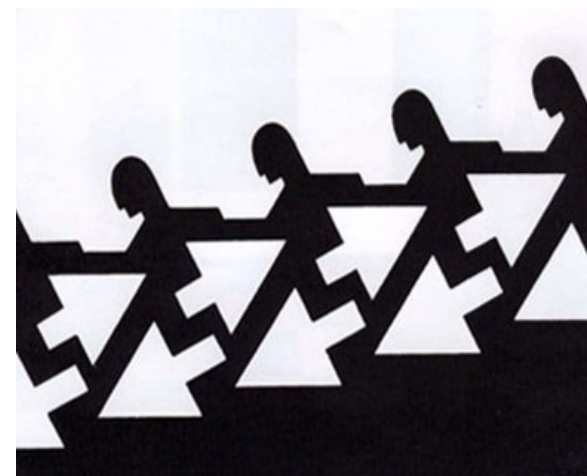
GUI设计规则：可视化

接近律 law of proximity

对称律 law of symmetry

[   ](   )[   ]

前背景分离 Figure-ground

屏幕元素的选择、布局、呈现及装饰

- 分组：grouping of items
  - ✓ *logically together* ⇒ *physically together*
  - ✓ *Color can also be used for grouping*

- 排序：order of items
  - ✓ *match screen order*

- 对齐：alignment of items
  - ✓ *Read/scan, search, compare*

- ✓ *use fonts for emphasis, headings*

- 装饰：decoration – colors, fonts, boxes, animation etc.

- 留白：white space between items
  - ✓ *space to separate*

GUI设计规则：一致性

- ✓ **Design interfaces to have similar operations and use similar elements for similar tasks**
- ✓ **Main benefit is consistent interfaces are easier to learn and use**
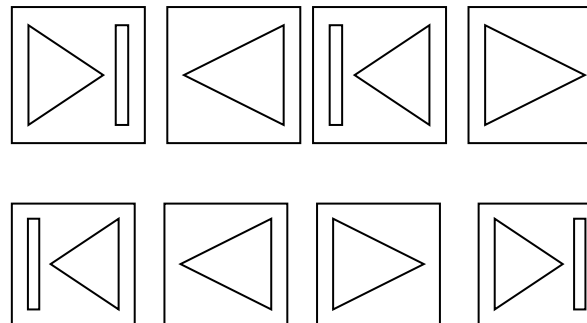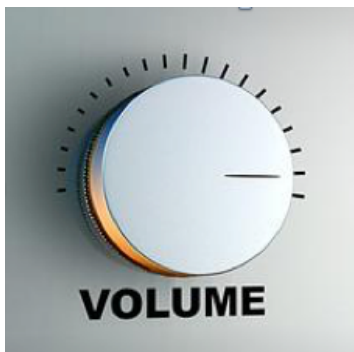
(a) phones, remote controls
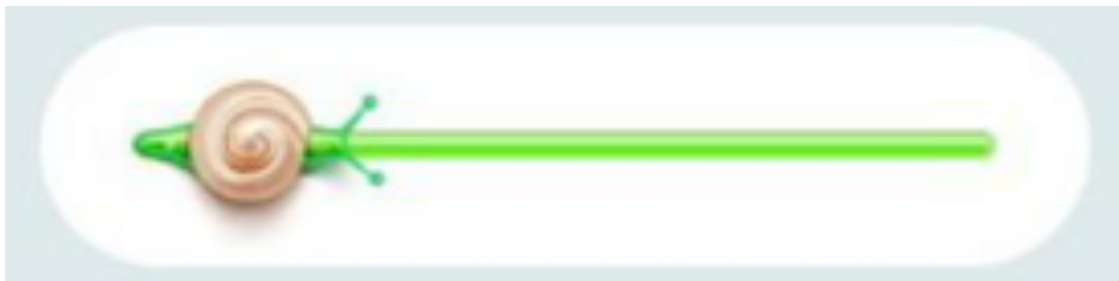

(b) calculators, computer keypads

GUI设计规则：直接映射
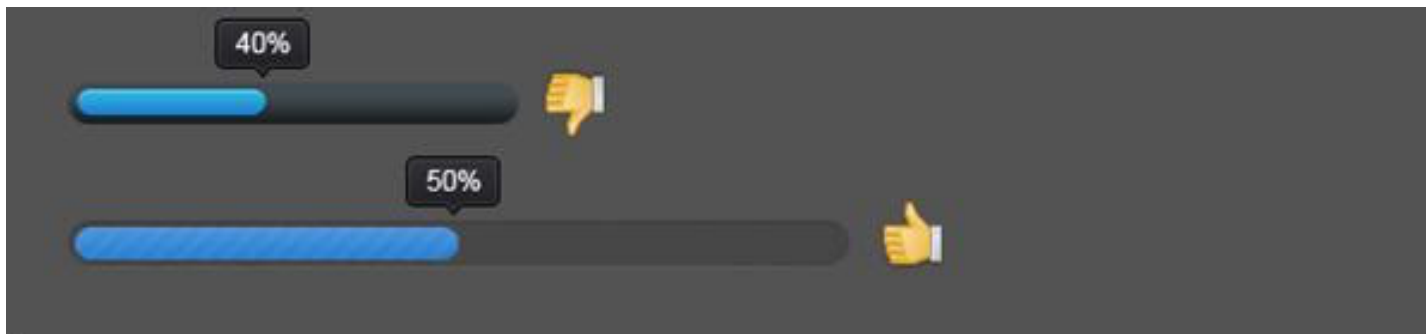
Relationship between controls and their movements and the results in the world

Sending information back to the user about what has been done

GUI设计规则

可视化 Visibility

一致性Consistency

直接映射Mapping

有效反馈Feedback

Design
Principles

GUI：DM，WYSIWYG，WIMP