



软件交互设计

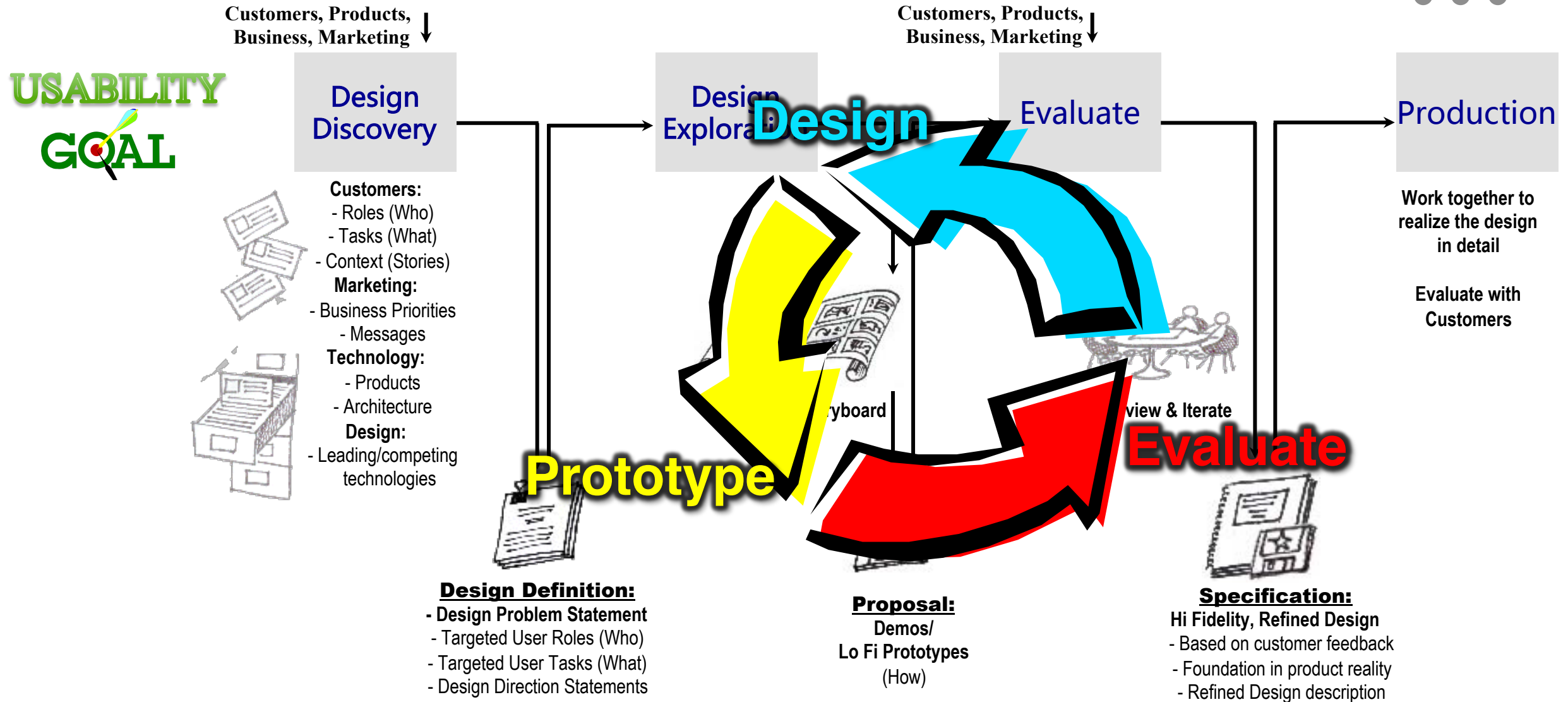
基本概念、设计目标、设计原理、设计过程



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交互设计过程



交互设计过程： Design

- **Design is driven by requirements**
 - what the artifact is for
 - not how it is to be implemented
- **A design represents the artifact**
 - for UIs these representations include
 - screen sketches or storyboards
 - flow diagrams/outline showing task structure
 - executable prototypes
 - representations simplify

EYE-CONTROL INTERFACE

- The Smart Vision system is a vision based interfacing medium which translates the eye and head movement of the user into actions in the Smart TV GUI.



Task Analysis & Contextual Inquiry

- Observe existing work practices
- Create examples & scenarios of actual use
- Discover tasks to design for
- Answer key questions about tasks & users
- “Try-out” new ideas before building software

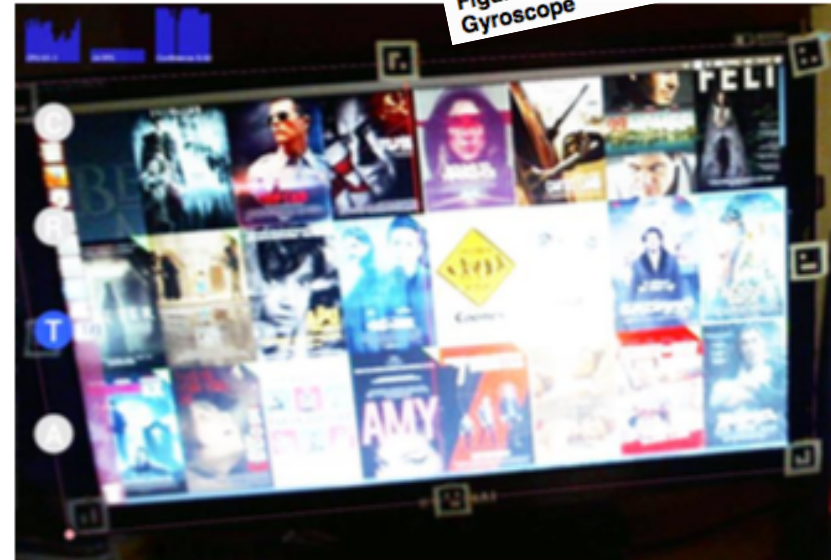
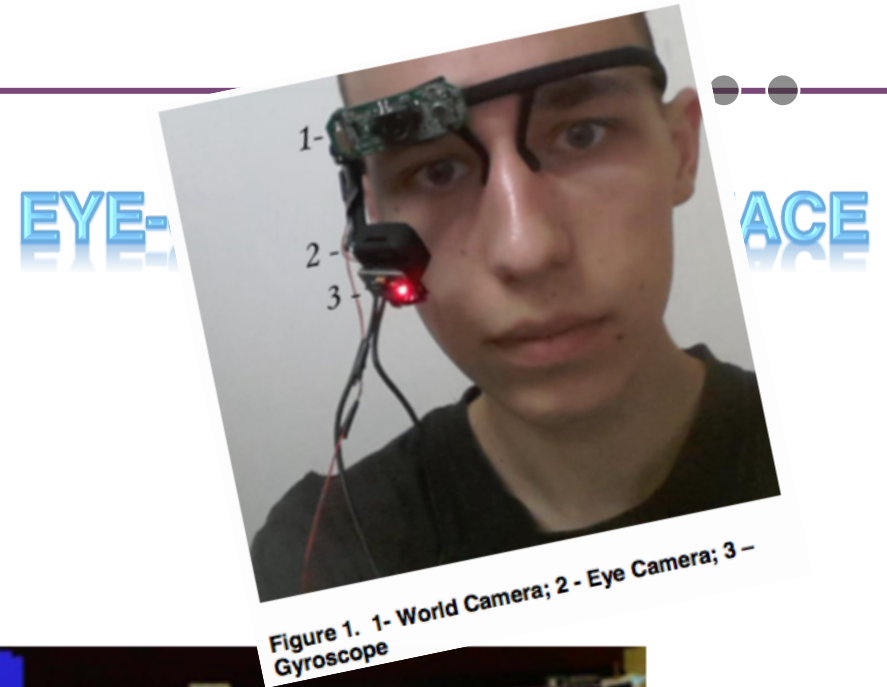
EYE-CONTROL INTERFACE

What is the task?	Play specific movie in database	Change volume while watching movie	Navigate to specific URL	Use on-page link and scroll on web-page
Who is the user?				
Where is the scene?	Relaxed situation in couch/bed	Relaxed situation in couch/bed	Relaxed work situation	Relaxed work situation
How is it done?	Using sight to point and head to select	Using sight to point and head to select	Using sight to point and head to select	Using sight to point and head to select
How often is it done?	Not often(only once per movie)	Semi often(several times per movie)	Semi often(for each new website to be visited)	Often(every time new content is wanted)
What are the time constraints on the task?	Can take some time, since it is only once per movie	Should not take focus from movie for too long	Should not take focus from what user is looking for	Should be very simple, in order match normal browsing
How can it go wrong -> be corrected?	Misclick -> Use the "back"/"Main menu" button in top left of screen	Misclick -> Try again	Misclick -> Use the "back"/"Main menu" button in top left of screen	Click wrong link -> Use "back" button Scroll too short/far -> Scroll again



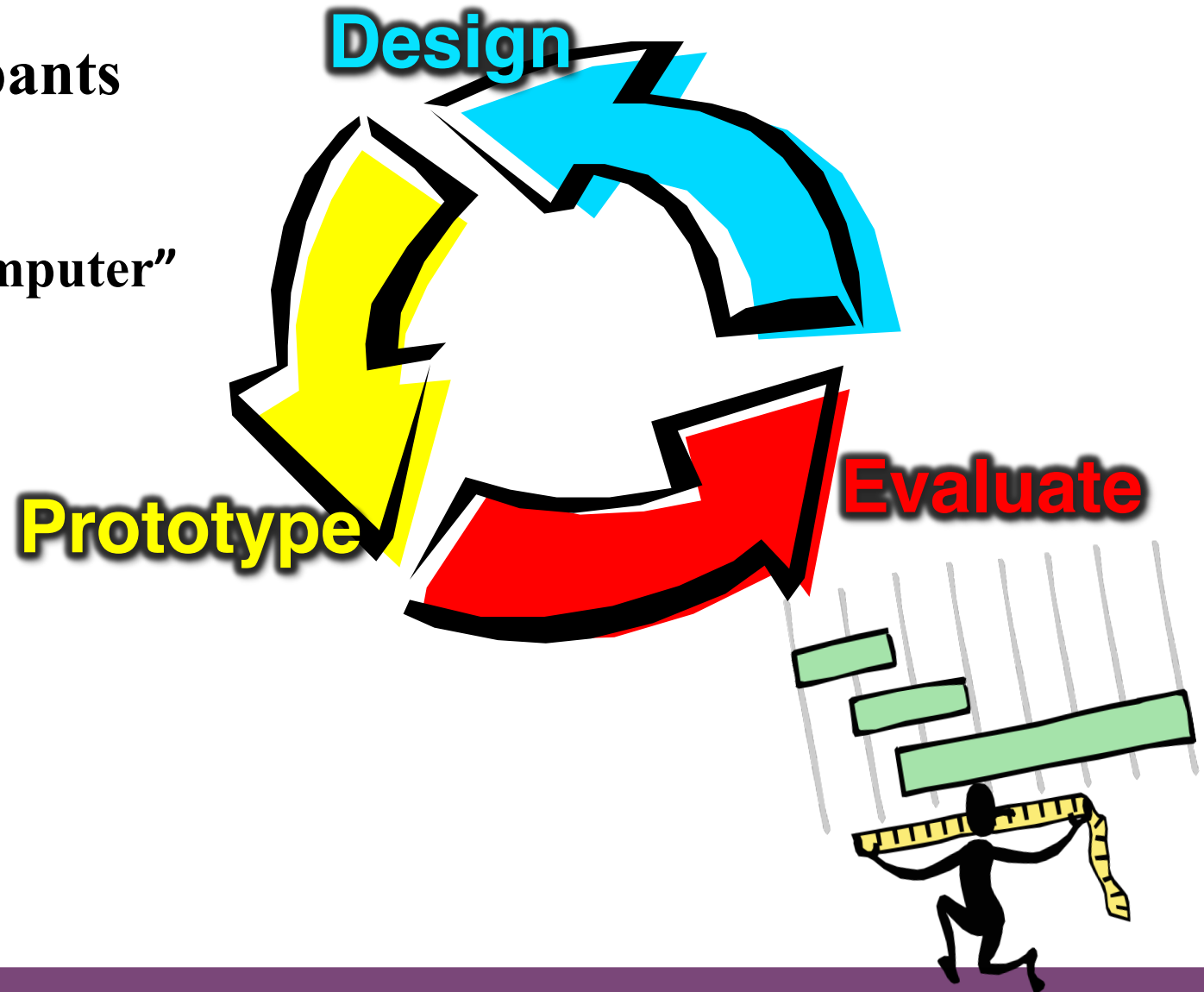
交互设计过程：Prototype

- **Build a mock-up of design so you can test**
- **Low fidelity techniques**
 - paper sketches
 - cut, copy, paste
- **Interactive prototyping tools**
 - HTML, Visual Basic, Flash, DENIM, etc.
- **UI builders**
 - Visual Studio .NET, JBuilder...



交互设计过程：Evaluation

- **Test with real participants**
 - interactive prototype
 - low-fi with paper “computer”
- **Build models**
 - KLM, Fitts
- **Low-cost techniques**
 - expert evaluation
 - walkthroughs
 - online testing





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