

INTRO TO HCI

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Human-Computer Interaction

Why Study UI

Web Programming

What Is HCI

Human-Computer Interaction

HUMAN

End-user of program

Others (friends, collaborators, coworkers)



Crowds



Post-Human



Children



Elderly



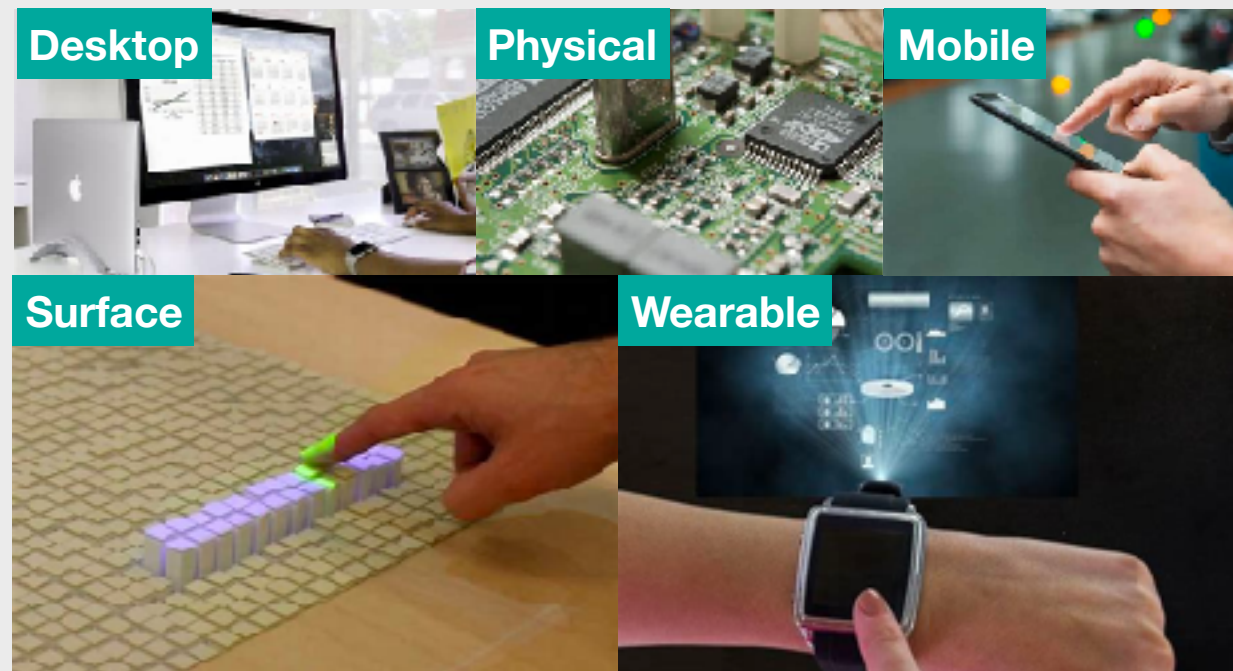
Accessibility



Human-Computer Interaction

COMPUTER

Machine program runs on
Clients & servers



Human-Computer Interaction

INTERACTION

User tells computer what they want

Computer communicates results



Degrees OR Jobs

Interdisciplinary Subject

MsD

CMU, IUB, Cornell, UMich, GIT, UW...

PhD

CMU, UCB, MIT, Stanford...

UI Designer

UX Designer

Product Manager

Front-End Developer

...

Why Study UI

Why Study User Interfaces?

INTERACTION

User tells computer what they want

Computer communicates results

Not just graphical



Why Study User Interfaces?

INTERACTION

User tells computer what they want

Computer communicates results

HCI = design, prototyping, implementation & evaluation of UIs

The results show that in today's applications, an average of **48% of the code** is devoted to the user interface portion.

– Myers & Rosson, CHI' 92

Why Study User Interfaces?

INTENTION

Intended for people other than yourself

Hard to get right

ERRORS

Life-threatening errors

1995 American Airlines jet crashed into canyon wall

On approach to Roanoke airport, system completed initial word “R” to Romeo

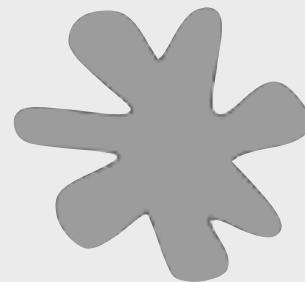
Mode errors, misunderstandings...

Building Successful Interfaces

AFFORDANCE 示能

“... the term affordance refers to the **relationship** between a physical object and a person (or for that matter, any interacting agent, whether animal or human, or even machines and robots)”

– Don Norman, *The Design of Everyday Things*



Building Successful Interfaces

AFFORDANCE 示能

Cultural dependencies

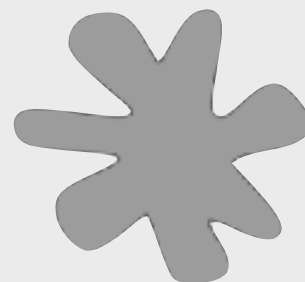
Experience

Knowledge

...

US down = off

UK/China down = on



Building Successful Interfaces

SIGNIFIERS 意符

Affordances determine what actions are possible.

Signifiers communicate where the action should take place.

Words, graphical illustrations...



Building Successful Interfaces

MAPPING 映射

The relationship between the elements of two sets of things



Building Successful Interfaces

FEEDBACK 反馈

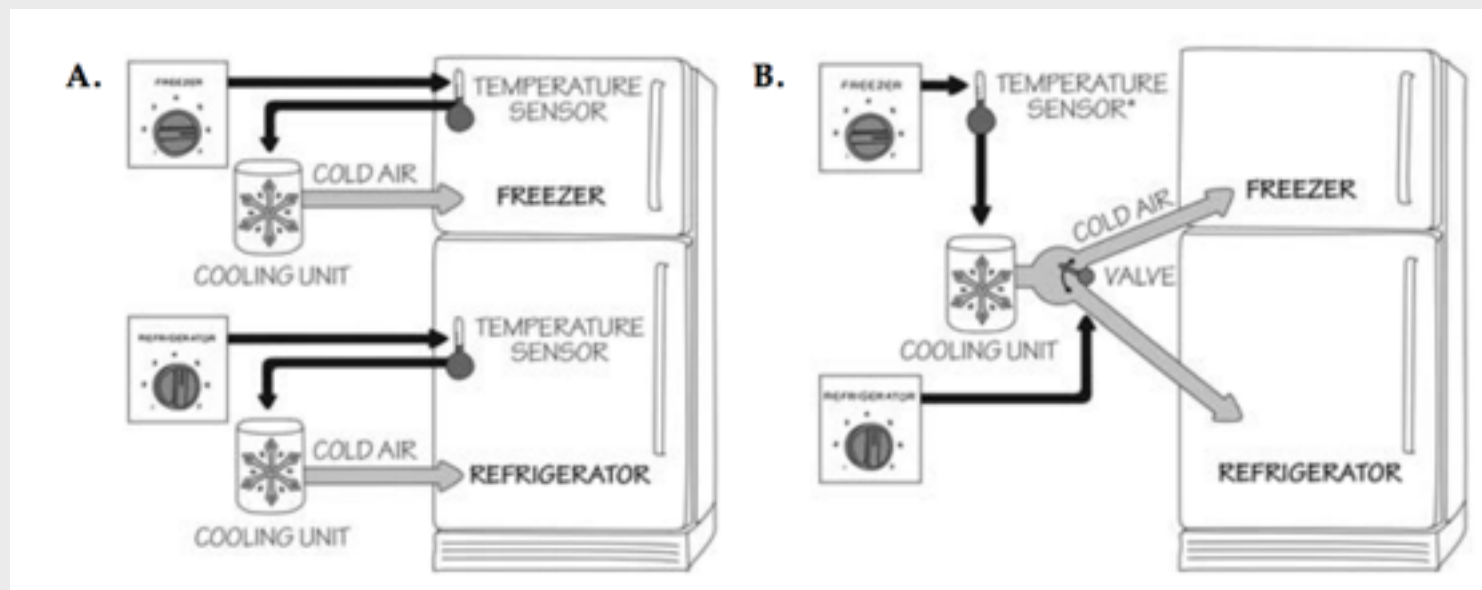
Communicate the results of an action



Building Successful Interfaces

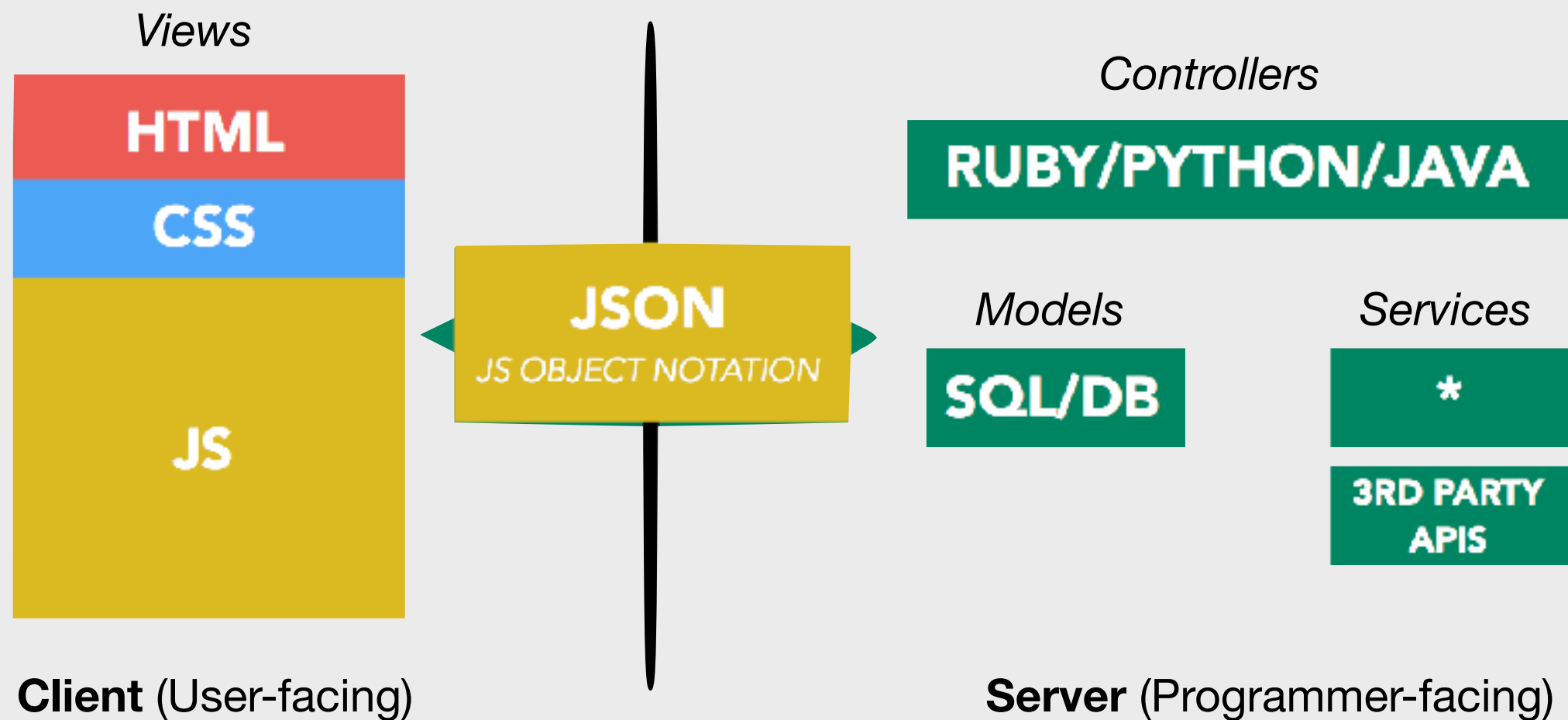
Conceptual Models 概念模型

An explanation, usually highly simplified, of how something works



Web Programming

Anatomy of a Web APP



Creative Programming



Paper.js



Static images

Q & A



THANKS