

Designing Interactive Systems I

Lab 4: A03, Levels of Processing, Errors

Oliver Nowak and Marcel Lahaye
Media Computing Group
RWTH Aachen University

Winter Semester 2020/21
<https://hci.rwth-aachen.de/dis>



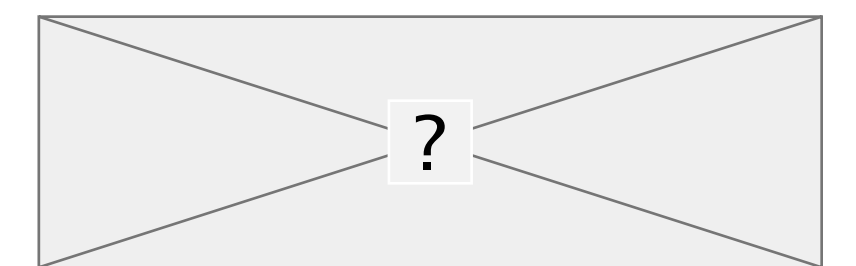
RWTHAACHEN
UNIVERSITY

General Remarks

- Please do not use the Moodle submission comments
- Seven Stages of Action is not a tracking tool. It is a Model of the optimal envisioned usage.
- The Lab's discussed examples are never to be considered as solutions
- The infinite width assumption is part of Fitts' Law
- If you have problems with format errors refer to the submission format PDF



Assignment 03



Natural Mappings

- In the lab, you identified instances of constraints from everyday life. Now you will identify one instance for each of the following design principles on a computing device (laptop, smartphone, smartwatch, etc.):
 - a. Natural mappings with spatial analogies
 - b. Natural mappings with perceptual analogies
 - c. Natural mappings with cultural analogies
 - d. Forcing function

Seven Stages of Action

In the previous assignment, you evaluated a home appliance by asking two users to perform a difficult task with it. Now, based on the observations you made through video(s) and hand-written notes, identify the different stages from the Seven Stages of Action model for the task users had the most difficulty with. In addition, also identify one potential gulf and indicate the stages between which this gulf occurs.

Seven Stages of Action

Goal

Plan

Specify

Perform

Perceive

Interpret

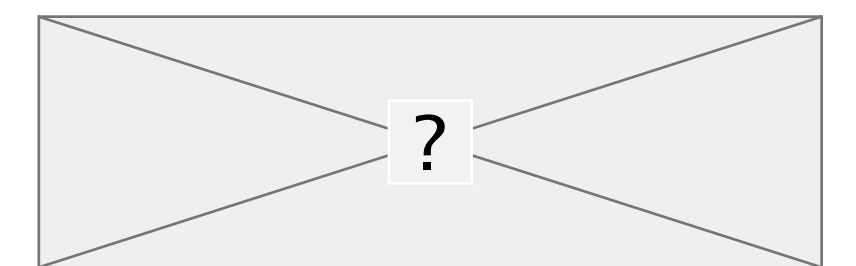
Compare



Levels of Processing

For the class of home appliance you used for task 2, identify three examples whose design is more closely associated with each of the three levels of process. E.g., if your home appliance is an alarm clock, find one example of an alarm clock that invokes primarily a visceral response, one that invokes a behavioral response, and one that invokes a reflective response.

Errors



In-Class Exercise #2: Classifying Errors

- We will now show you some errors—classify if it is a mistake or a slip.
- Oliver wanted to have yogurt. In his fridge, he had both yogurt and sour cream next to each other. The packaging for these two items are similar. Oliver picks the sour cream and even takes a spoonful of it.
- Marcel is waiting at a traffic signal to cross the road. He is only passively paying attention to the signal. He sees the color green in his peripheral vision and starts walking only to discover later that the signal turned for an intersecting road. Incredibly, he's still alive! Yay!
- Oliver usually makes coffee in the kitchen and then goes to the restroom (in the time it takes for the coffee to be made). On most occasions, he uses the restroom and then passes by the kitchen forgetting to take his coffee.
- Marcel is going to a tennis court to hit some balls. He is wearing his work shoes, so he wants to take them off and use his tennis shoes. After taking off his shoes, he also takes off his socks unintentionally.
- Oliver wants to watch the movie “Halloween” on his laptop. Without knowing that his laptop’s system volume is muted, he increases the volume in his media player, but finds that the volume doesn’t increase.

In-Class Exercise #3: Classifying Slips

- Come up with examples of slips that could occur when you are cooking. Identify at least one example for the following:
 - Capture slips
 - Description-similarity slips
 - Mode-errors
 - Memory lapse



A04: Types of Knowledge and Mistakes

