Friedrich-Alexander-Universität
Technische Fakultät

Machine Learning
Data Analytics

FAU

Human Computer Interaction

Chapter 4: Basics & Principles of HCI

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Overview

01 Motivation

02 Principles to support Usability by Dix et al.

- Principle 1: Learnability
- Principle 2: Flexibility
- Principle 3: Robustness

03 Principles for UI-Design by Shneiderman

- Principle 1: Recognize User Diversity
- Principle 2: Follow the Eight Golden Rules
- Principle 3: Prevent Errors

04 References

Machine Learning and Data Analytics Lab (MaD) in Erlangen

Motivation

Motivation

© Twentieth Century Fox Home

What the user sees

Users only see what is visible!

What the developer knows

- Users only see what is visible
- Users have little idea about
  - Architecture
  - State transitions
  - Dependencies
  - Application context
  - System restrictions
  - …

And users often
do not know about it

http://resoundings.org/Pages/Speeds_of_Time.html,
Photo by Alvesgaspar http://en.wikipedia.org/wiki/File:Big_Ben_2007-1.jpg (CC BY-SA 3.0)

Practical Motivation

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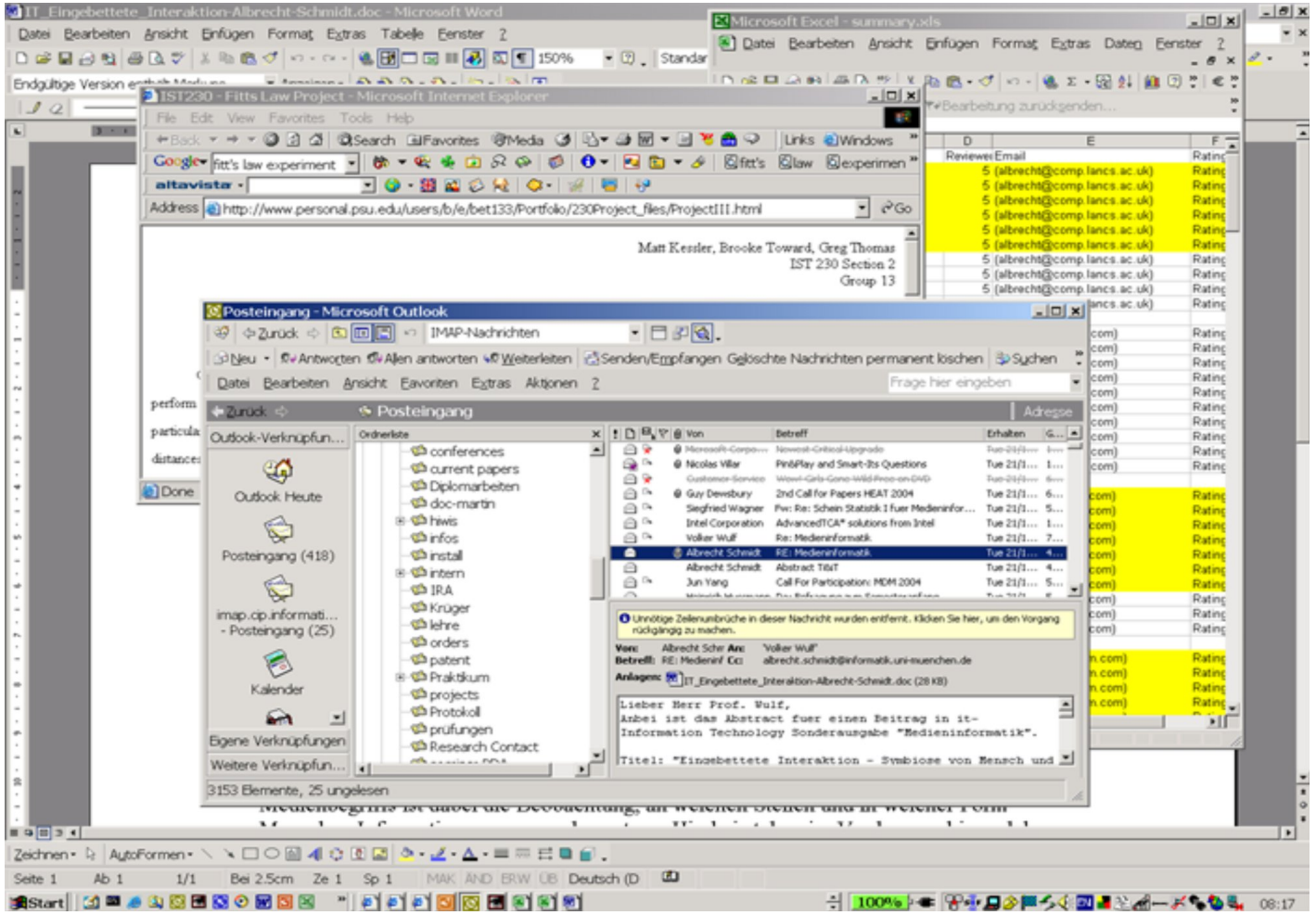
What …

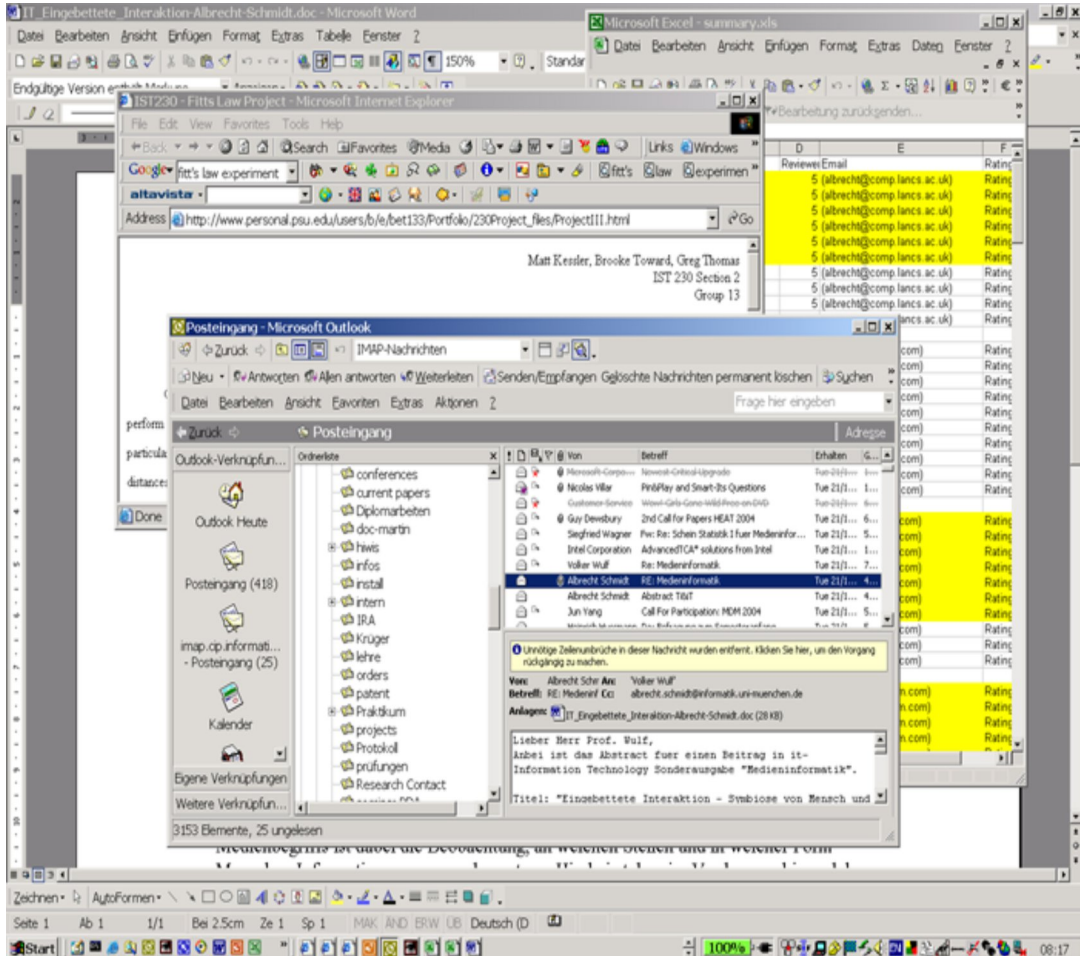
- …do we see?
- …is shown?
- …is the meaning?

Why
do you know the meaning?



Skilled Computer Users Answers

- Win2000 desktop
- Text and figures
- Icons and toolbars
- Overlapping windows
- Scroll bars and menus
- Task bar and status information
- Handles and a pointer
- Representations of documents



Basic (Naive) Technical Answers

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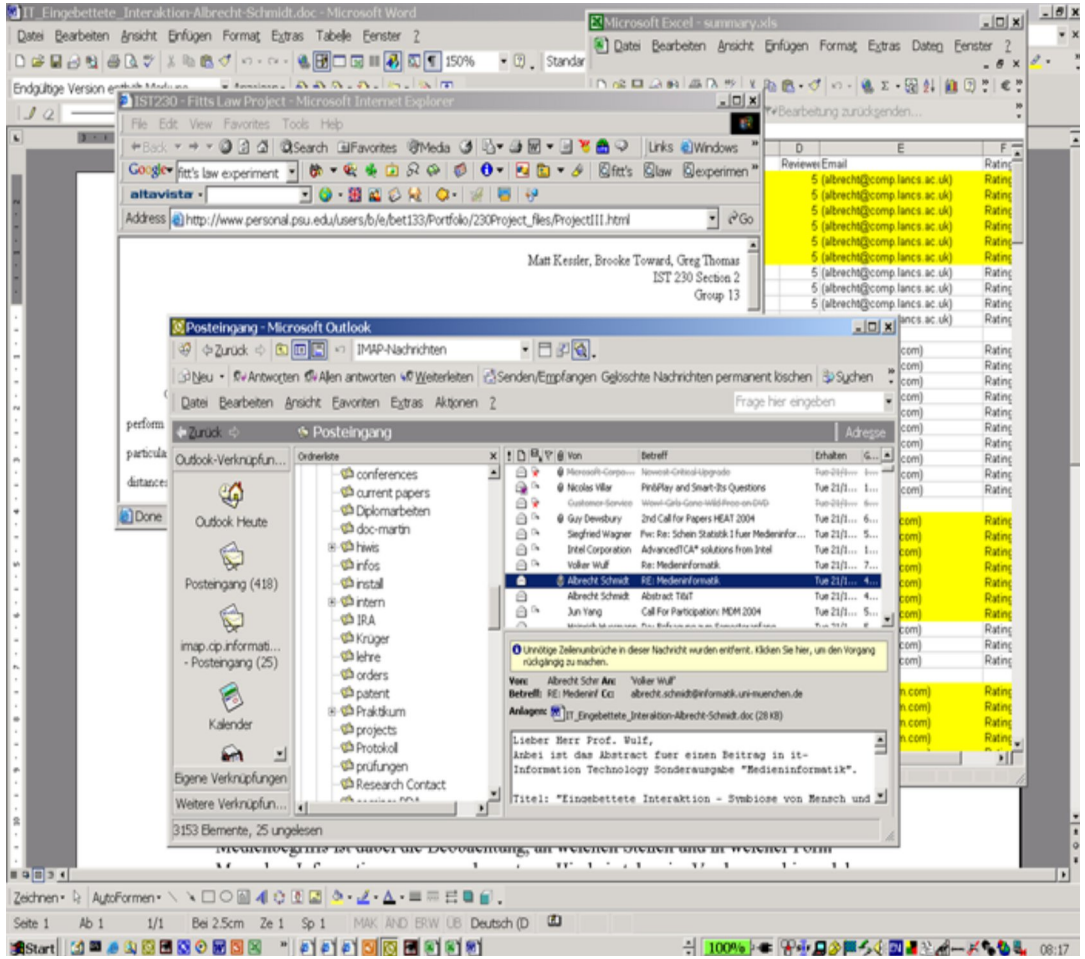
- 2-D surface
- Controllable pixels
- 2D-Image with a resolution of 1400x1050 pixels
- For each pixel the colour can be set
- The change of colour can be controlled rapidly



Perfect User‘s Answers

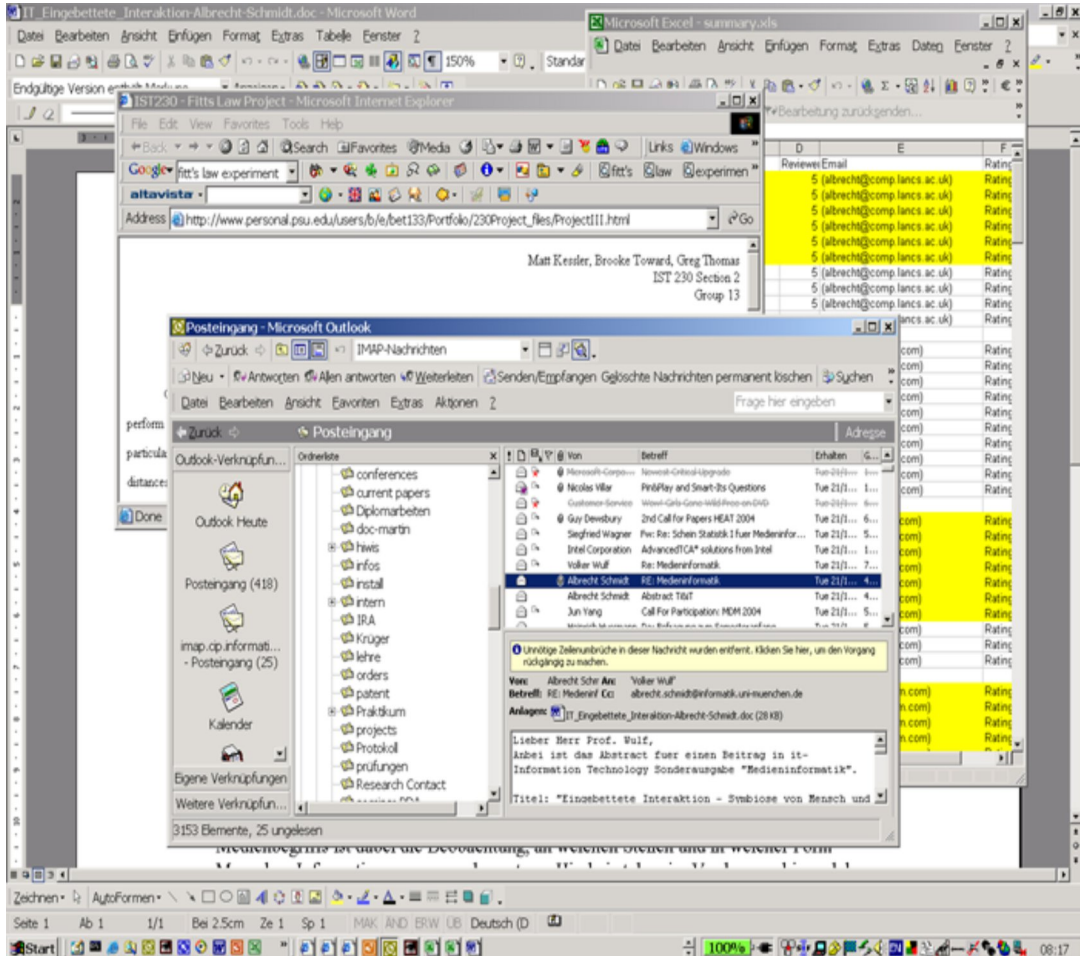
My work environment

Meeting notes

Budget for next year

Request to write a technical article

Background information on a psychological phenomenon



Thank you for your attention