



Human Computer Interaction

Chapter 4: Basics & Principles of HCI

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Summer Term 2024

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



© Twentieth Century Fox Home

What the user sees



Machine Learning
Data Analytics



no inside

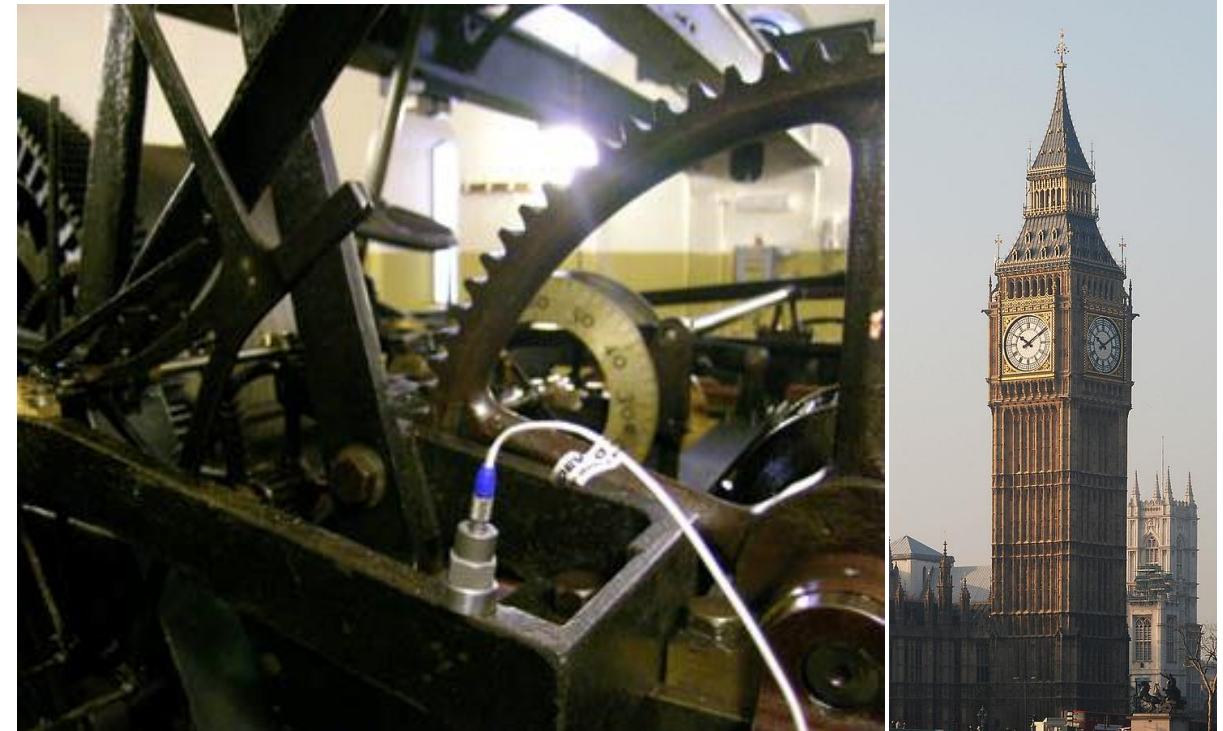
only outside.



Users only see what is visible!

- 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,

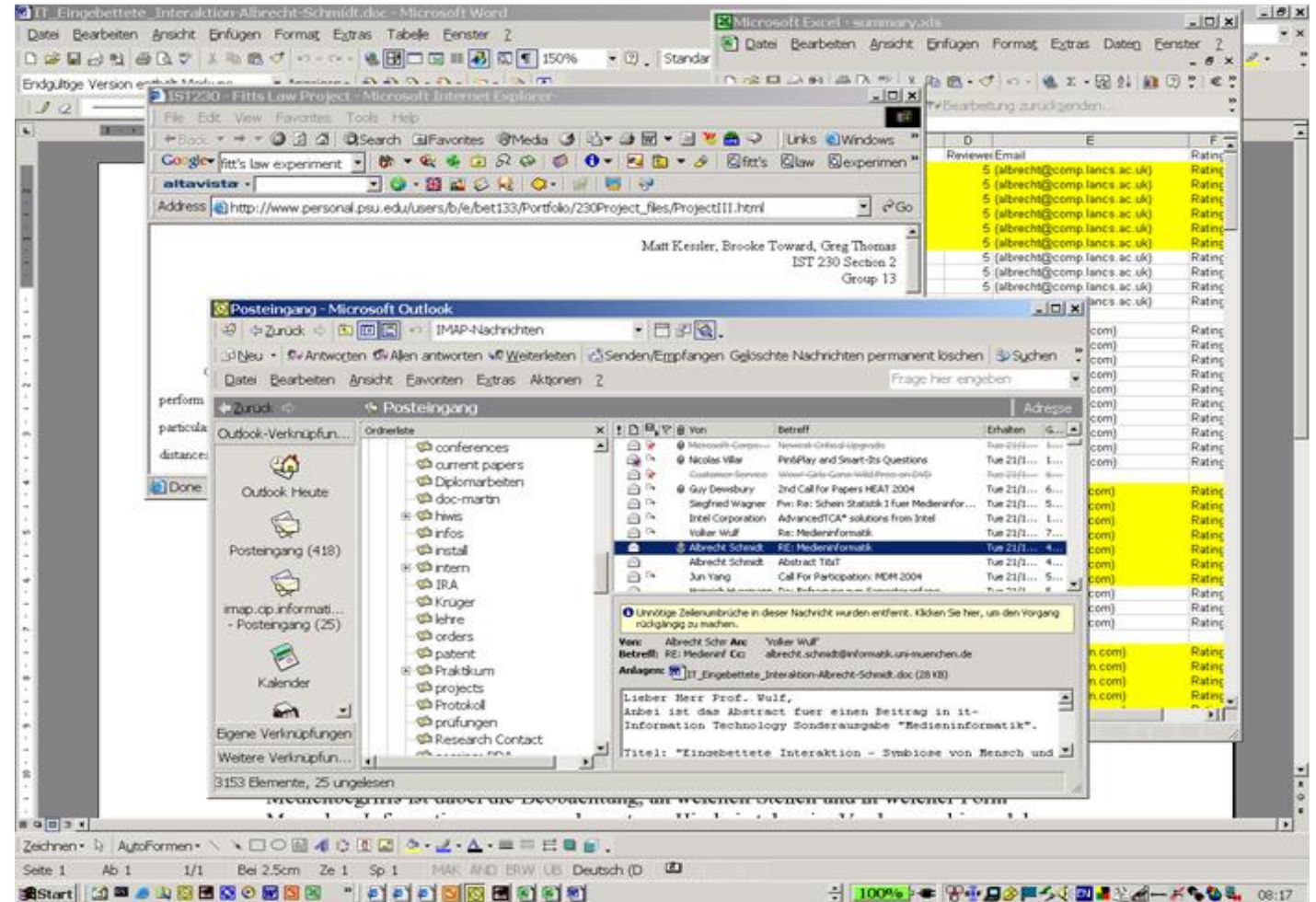
Photo by Alvesgaspar http://en.wikipedia.org/wiki/File:Big_Ben_2007-1.jpg (CC BY-SA 3.0)

What ...

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

Why

do you know the meaning?



Skilled Computer Users Answers



Machine Learning
Data Analytics



To the point

Win2000 desktop

Text and figures

Icons and toolbars

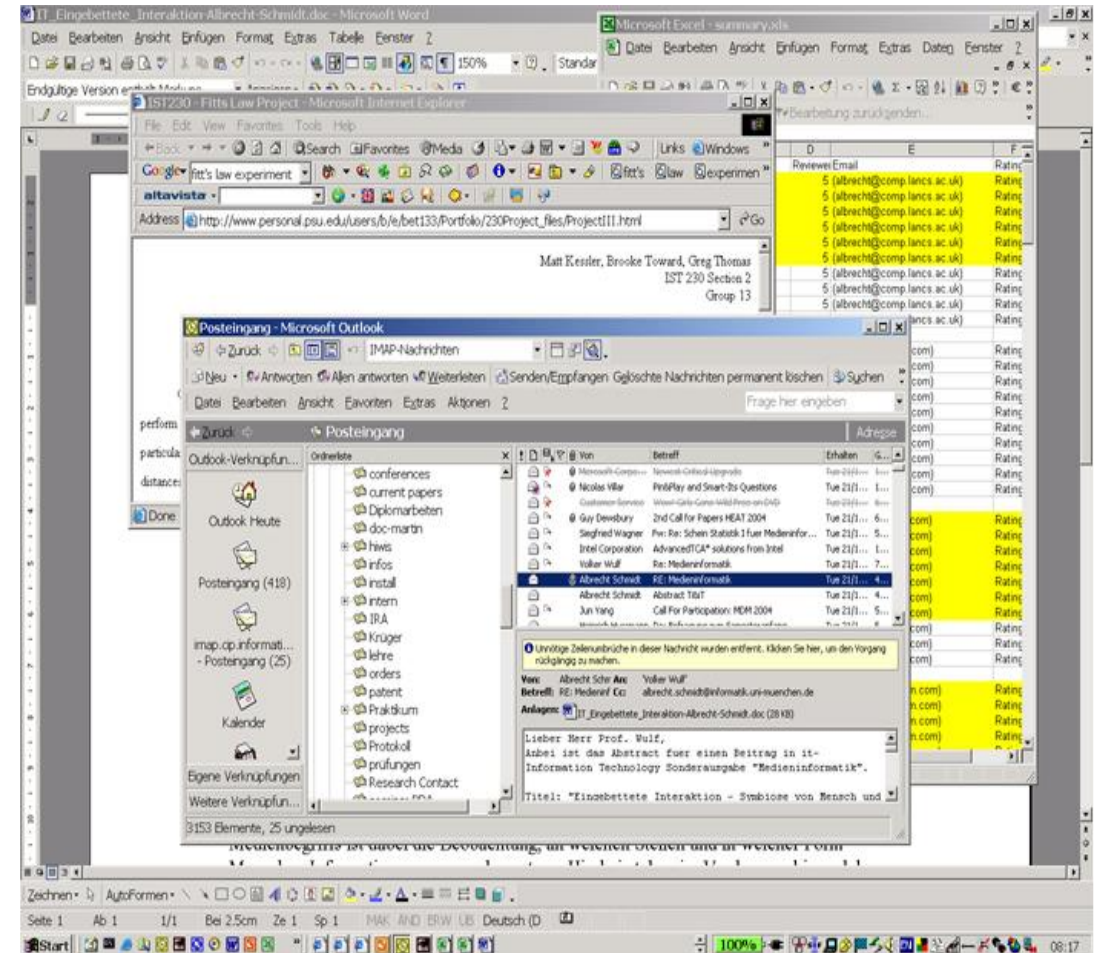
Overlapping windows

Scroll bars and menus

Task bar and status information

Handles and a pointer

Representations of documents



Basic (Naive) Technical Answers



Machine Learning
Data Analytics



Save useless details

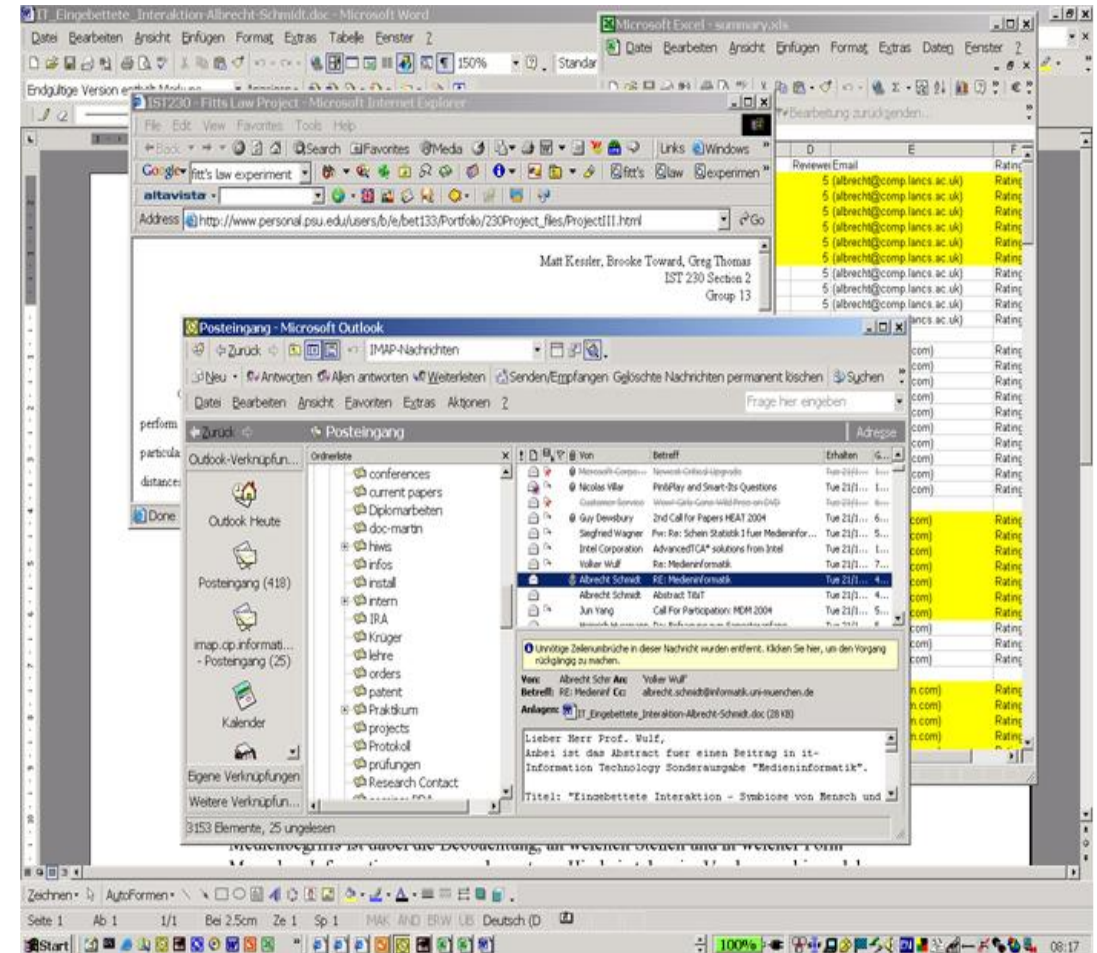
2-D surface

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



Machine Learning
Data Analytics



Personalised answers.

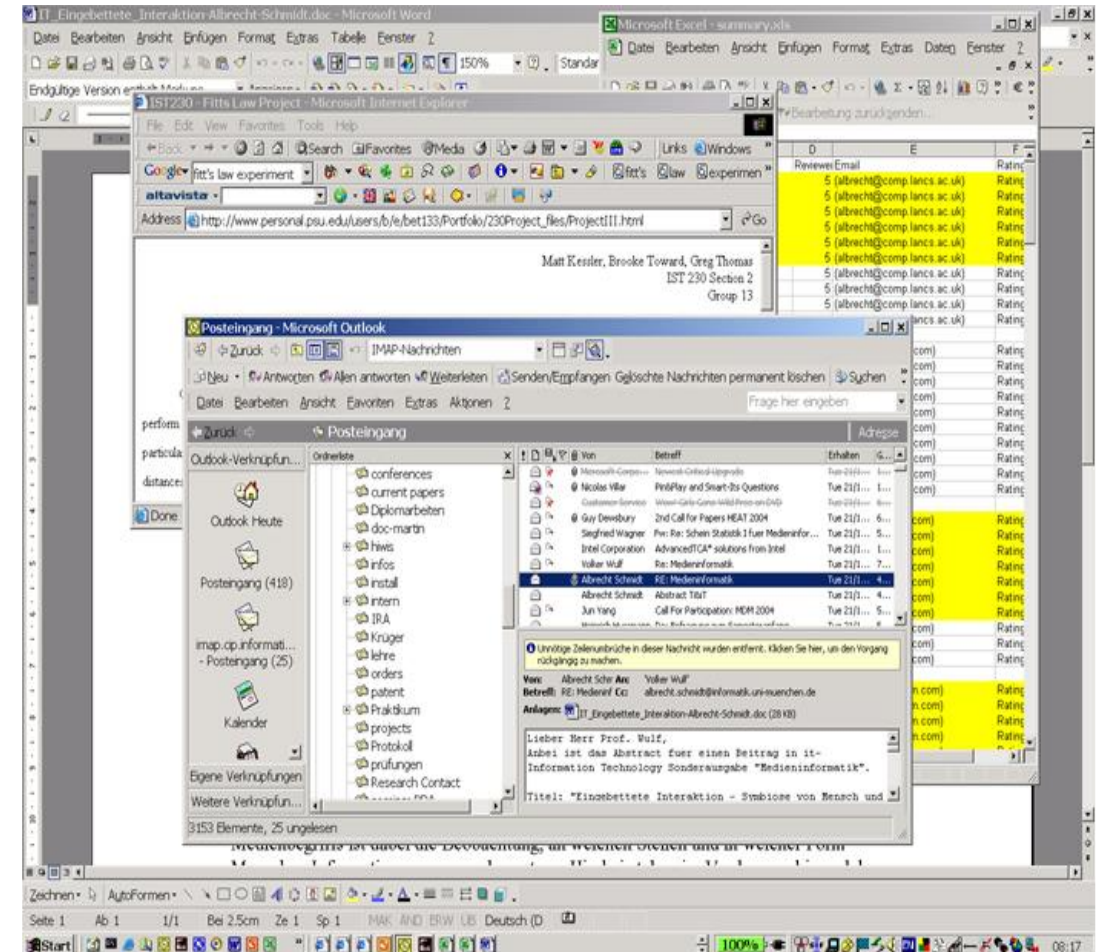
My work environment

Meeting notes

Budget for next year

Request to write a technical
article

Background information on a
psychological phenomenon





**Thank you
for your attention**