CTHCI Lab 1
Paper Reading and Identifying Contribution Types

Philipp Wacker
Media Computing Group
RWTH Aachen University

Summer term 2016

http://hci.rwth-aachen.de/cthci
Do I need to know what problems that GPS creates while driving?
  - No.

**Required reading**: Examinable, must be read by everyone

**Recommended reading**: Not examinable

**Other example papers**: Not examinable
  - Examples to illustrate the concepts explained in the class.
HCI Research: Approaches and Contributions

- Test
- Look
- Make

Seven Research Contribution types
- Empirical
- Artifact
- Methodological
- Theoretical
- Dataset
- Survey
- Opinion

In-class exercise
Research Example: CommandMaps

• Scarr et al., Best paper CHI ’12

• Improve toolbar (specifically Microsoft’s Ribbon interface)

• In-class exercise:
  • Contributions?
  • Benefits?
  • Which part uses empirical science, ethnography, and engineering/design approach?
Improving Command Selection with CommandMaps

Joey Scarr†, Andy Cockburn†, Carl Gutwin‡, Andrea Bunt*

† Computer Science, University of Canterbury, New Zealand
‡ Computer Science, University of Saskatchewan, Canada
* Computer Science, University of Manitoba, Canada
CommandMaps

- Contributions & Benefits:
  
  - “Introduces CommandMap interfaces for mouse-based command invocation. Theoretically and empirically demonstrates that their defining properties — spatially stable command locations and a flat command hierarchy — improve user performance.”

  [Scarr et al., CHI ’12]
Improving command selection with CommandMaps
Joey Scarf, Andy Cockburn, Carl Gutwin, and Andrea Bunt. CHI 2012.

Designers of GUI applications typically arrange commands in hierarchical structures, such as menus, due to screen space limitations. However, hierarchical organisations are known to slow down expert users. This paper proposes the use of spatial memory in combination with hierarchy flattening as a means of improving GUI performance.

We demonstrate these concepts through the design of a command selection interface, called CommandMaps, and analyse its theoretical performance characteristics. We then describe two studies evaluating CommandMaps against menus and Microsoft's Ribbon interface for both novice and experienced users. Results show that for novice users, there is no significant performance difference between CommandMaps and traditional interfaces -- but for experienced users, CommandMaps are significantly faster than both menus and the Ribbon.
In-Class Exercise: Practice Skimming and Classifying

Approaches
- Test
- Look
- Make

Seven Research Contribution types
- Empirical
- Artifact
- Methodological
- Theoretical
- Dataset
- Survey
- Opinion

Practice your skill!
In-class: use the handouts
At home: visit
http://chi2016.acm.org/program/
Retrieving and Searching for Papers

- Google Scholar: Entry point, alerts, citation search, finding the full version for free
- ACM Digital Library: The main archive, video materials, comprehensive search by author
  - CHI: http://dl.acm.org/event.cfm?id=RE151&tab=pubs
  - UIST: http://dl.acm.org/event.cfm?id=RE172&tab=pubs
  - MobileHCI: http://dl.acm.org/event.cfm?id=RE395&tab=pubs
- Elsevier authentication
  - IJHCS: http://www.journals.elsevier.com/international-journal-of-human-computer-studies/recent-articles/
  - Citeology: Citation visualization (1982–2010)

Important resources for all your assignments
CITEOLOGY
Assignment Groups

• Three assignment, in groups
  • Assignments and peer feedback process will be available on our public website
• Each group should have 6-7 students
• I will send an online form to fill in your groups (surnames)
  • Set up your groups by tomorrow (23:59:59)
• I will assign students who do not have any group
• You will receive an email from me an Friday with the emails of your team members and assigned topic for A01
## Assignment Process

<table>
<thead>
<tr>
<th></th>
<th>Day 0</th>
<th>until 27.04.</th>
<th>until 02.05</th>
<th>until 04.05</th>
<th>until 04.05 6 AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil</td>
<td>Hands out the assignment</td>
<td>Assigns peer reviews</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A</td>
<td>Works on initial submission</td>
<td>Peer reviews submission of Group B</td>
<td>Prepares final submission</td>
<td>Sends final submission to Phil</td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>Works on initial submission</td>
<td>Peer reviews submission of Group A</td>
<td>Prepares final submission</td>
<td>Sends final submission to Phil</td>
<td></td>
</tr>
</tbody>
</table>
L01 Referenced Literature