

Lab 8: Evaluation

Week 9

DECIDE: A framework to guide evaluation

Context

Well-planned evaluations are driven by clear goals and appropriate questions.

The **DECIDE** framework provides a checklist for novice evaluators:

- Determine the overall *goals* that the evaluation addresses.
- Explore the specific *questions* to be answered.
- Choose the *evaluation paradigm* and *techniques* to answer the questions.
- Identify the *practical issues* that must be addressed, such as selecting participants.
- Decide how to deal with *ethical issues*.
- Evaluate, interpret and present the *data*.

The Exercise (30 minutes)

In groups, consider the user interface **evaluation** for the three example systems below.



Online shop



Touch-screen OS



Air Traffic Control system

Work through the DECIDE framework with one or more of the examples. Consider contrasting evaluation paradigms and use of different techniques (see Appendices 1&2 below) and how they can support completing the DECIDE framework questions.

Class Reflection (10 minutes)

Each group presents their DECIDE answers to the class. Compare and contrast how different groups have applied the DECIDE questions across the examples user interfaces and the evaluation paradigms/techniques.

Appendix 1: Four core evaluation paradigms:

- “Quick and dirty”
 - A common practice in which designers informally get feedback from users or consultants
 - The data collected is usually descriptive and informal. Fed back into the design process as verbal or written notes, sketches and anecdotes
 - It is popular in web design where the emphasis is usually on short timescales
- Usability testing
 - Typically involves measuring typical users' performance on carefully prepared tasks
 - Users' performance is measured in terms of number of errors and time to complete the task
 - Users are watched and recorded on video and their interactions logged with software
 - User satisfaction questionnaires and interviews are also used to elicit users' opinions
- Field studies
 - Done in natural settings with the aim of increasing understanding about what users do naturally and how technology impacts them
- Predictive evaluation
 - Experts apply their knowledge of typical users, often guided by heuristics, to predict usability problems
 - Another approach involves theoretically based models, e.g. GOMS (Goals, Operators, Methods, Section), Keystroke Level Model (exploring the time it takes to perform tasks), or Fitt's Law (time it takes to reach a target with a pointing device)

Appendix 2: Evaluation techniques

There are many evaluation techniques and they can be categorized in various ways

These include:

- Observing users
- Asking users their opinions
- Asking experts their opinions
- Testing users' performance
- Modelling users' task performance to predict the efficacy of a user interface