High Fidelity Presentation Aid

Ethics in IT Practice

Heuristic Evaluations

Wrap up

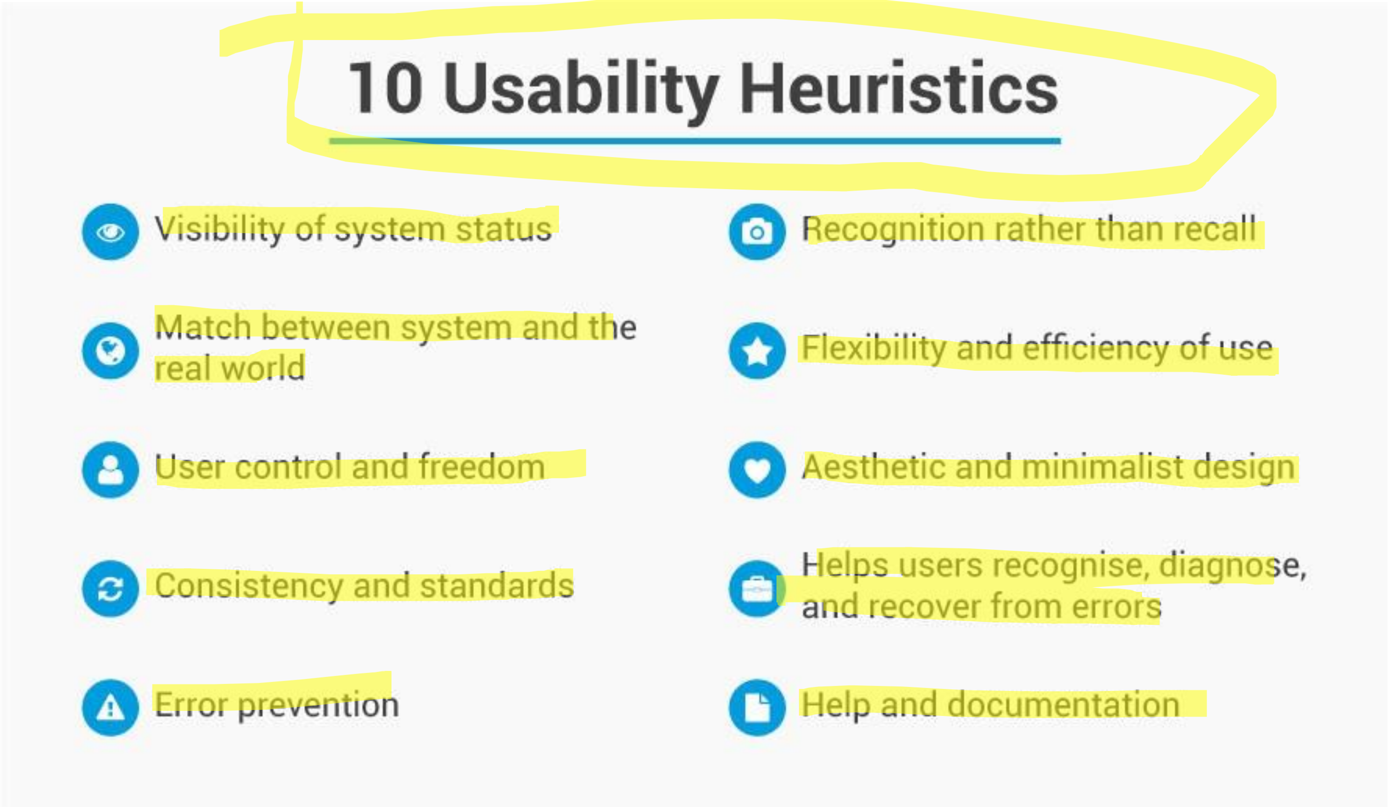
Heuristic Evaluations & Walkthroughs

Heuristic evaluations (Nielsen and Molich, 1990; Nielsen 1994) are a usability engineering method for finding usability problems in a user interface design so that they can be attended to as part of an iterative design process.

Heuristic evaluation involves having a small set of evaluators examine the interface and judge its compliance with recognized usability principles (the "heuristics").

These heuristics are akin to high level design principals, which allow us as designers to better understand issues in our work.

Heuristic Evaluations & Walkthroughs



10 Usability Heuristics

- Visibility of system status
- Match between system and the real world
- User control and freedom
- Consistency and standards
- Error prevention
- Recognition rather than recall
- Flexibility and efficiency of use
- Aesthetic and minimalist design
- Helps users recognise, diagnose, and recover from errors
- Help and documentation

Heuristic evaluation of user interfaces *by Nielsen, Jakob; Molich, Rolf Proceedings of the SIGCHI Conference on human factors in computing systems, 03/1990*

Heuristic Evaluations & Walkthroughs

Conducting Heuristic Evaluations:

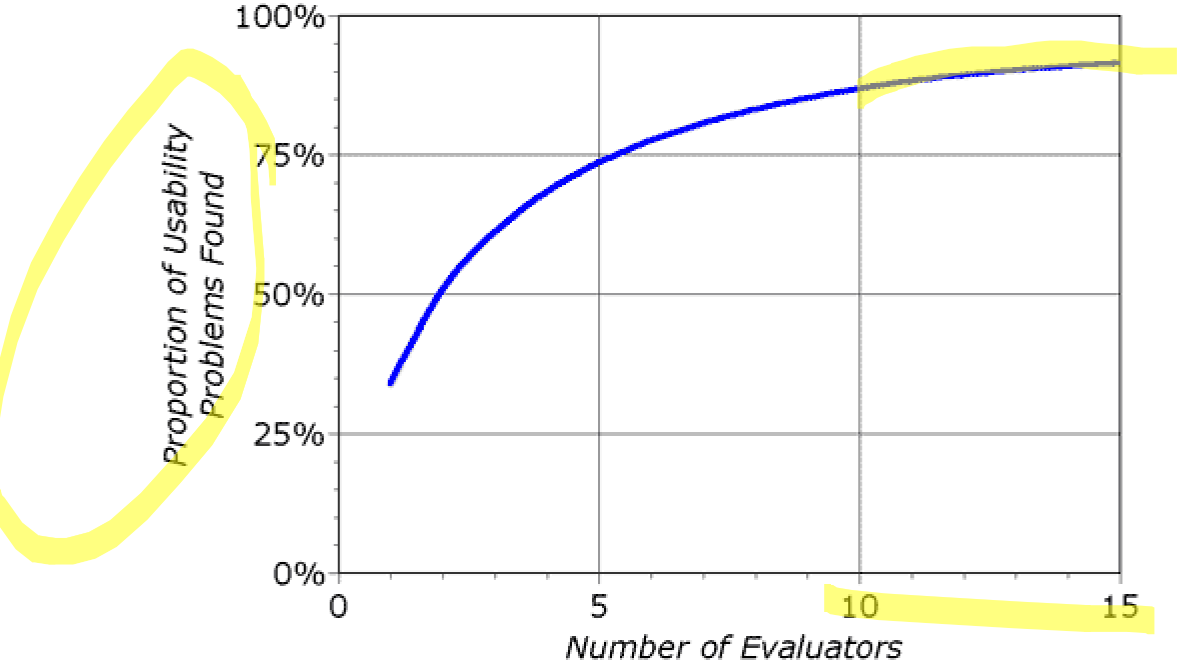
These are often done with a handful of experts, including the designers of the intended artefact, or persons or researchers in a similar space. Users can be taught to undertake these evaluations, but are often less successful (Nielsen, 1994a).

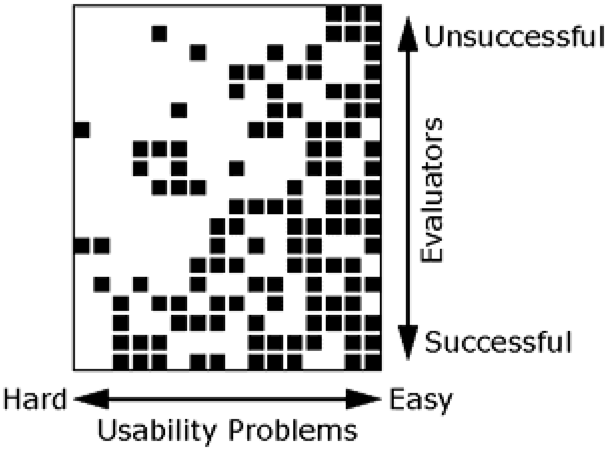
Heuristic Evaluations are often broken into 3 stages:

- **Briefing session** – Experts are told what to do and a script is given as a guide
- **Evaluation period** – Inspection of artefact using heuristics as guidance. Specific user tasks created and worked through. Often one expert will act as a scribe and the person undertaking the tasks will think aloud.
- **Debriefing period** – Coming together to discuss findings and offer solutions.

Preece, J., Rogers, Y., & Sharp, H. (2015). *Interaction design: Beyond human-computer interaction* (Fourth ed.). Hoboken: John Wiley & Sons.

Heuristic Evaluations & Walkthroughs





Dykstra, D. J. 1993. ***A Comparison of Heuristic Evaluation and Usability Testing: The Efficacy of a Domain-Specific Heuristic Checklist*** .
Ph.D. diss., Department of Industrial Engineering, Texas A&M University, College Station, TX

Cognitive Walkthroughs

Cognitive Walkthroughs are an alternative to Heuristic Evaluations, which allow for prediction of user problems during testing. They involve simulation of users problem solving processes at every step of a human-computer dialogue (Preece, J., Rogers, Y., & Sharp, H. 2015).

Documentation of the process is important, as Cognitive Walkthroughs often involve a high level of detail at each step.

The main difference between cognitive walkthroughs and heuristic evaluations is that these focus on ***specific tasks.***

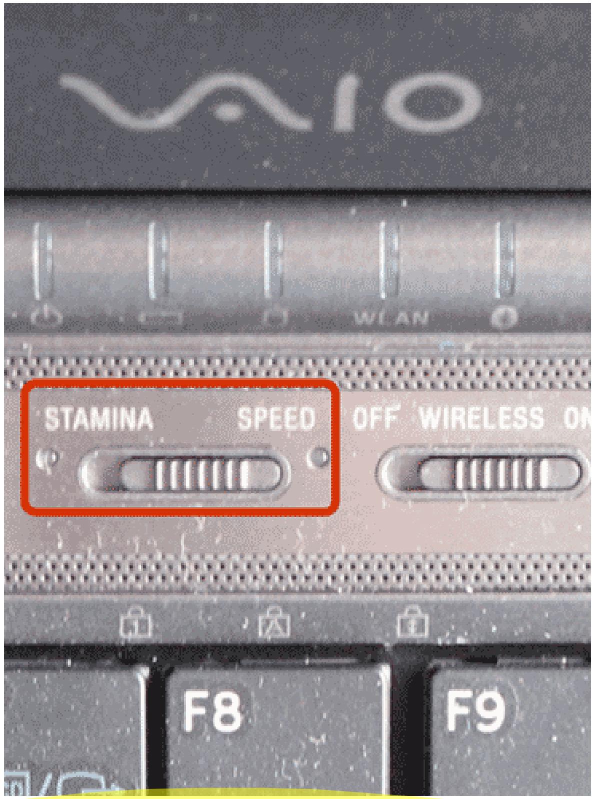
Cognitive Walkthroughs

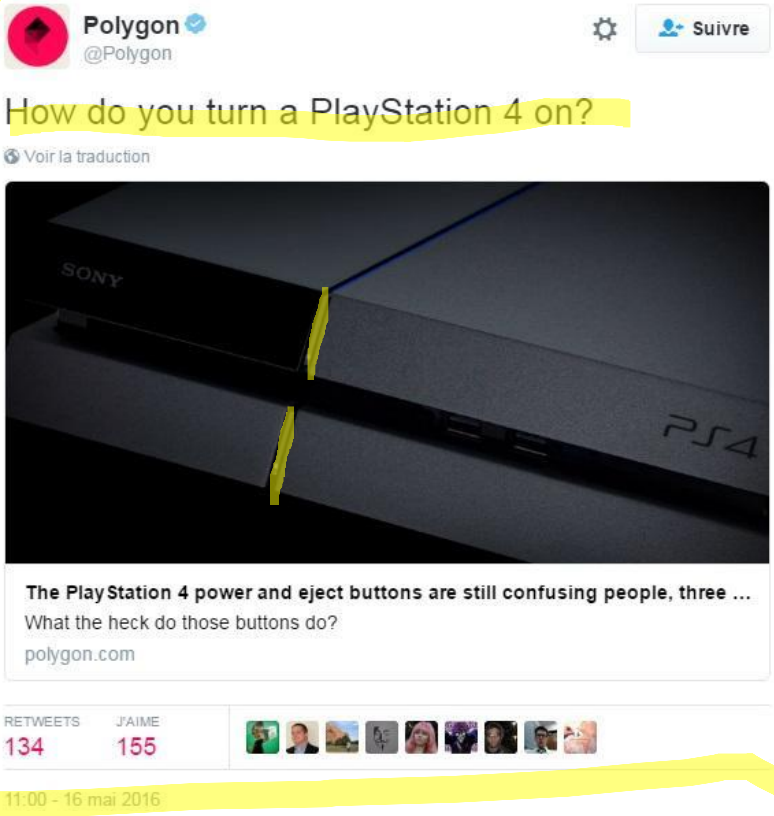
Look at each step in your interface and ask yourself these 4 questions. In a cognitive walkthrough we would select a task and engage a user in it, to understand their issues in each section.

1. Will the customer realistically be trying to do this action?
2. Is the control for the action visible?
3. Is there a strong link between the control and the action?
4. Is feedback appropriate?

Let’s see some examples:

Cognitive Walkthroughs




Polygon
@Polygon

How do you turn a PlayStation 4 on?

The PlayStation 4 power and eject buttons are still confusing people, three ...

What the heck do those buttons do?

polygon.com

RETWEETS 134 J'AIME 155

11:00 - 16 mai 2016

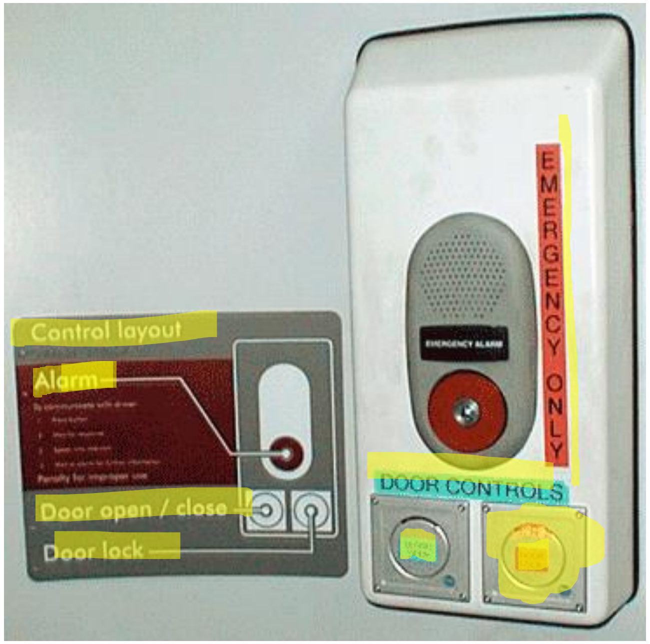
Will the customer realistically be trying to do this action?

Is the control for the action visible?

http://www.userfocus.co.uk/articles/cogwalk.html

Cognitive Walkthroughs

Is there a strong link between the control and the action?



Is feedback appropriate?

http://www.userfocus.co.uk/articles/cogwalk.html

High Fidelity Presentation Aid

Ethics in IT Practice

Heuristic Evaluations

Wrap up

Drawing it **all** together

Prototyping should support and allow you to understand how your idea will work in reality. Ethical considerations are key to many modern IT issues.

Evaluations and walkthroughs are powerful ways of understand how users can respond to your prototype.

Next week we will look at new content – how to analyse and design back end systems.