

Heuristic Evaluation - Heuristics

Heuristics (Nielson, 1995: <http://www.nngroup.com/articles/ten-usability-heuristics/>)

1. **Visibility of system status**

- The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

2. **Match between system and the real world**

- The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

3. **User control and freedom**

- Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

4. **Consistency and standards**

- Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

5. **Error prevention**

- Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

6. **Recognition rather than recall**

- Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7. **Flexibility and efficiency of use**

- Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. **Aesthetic and minimalist design**

- Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9. **Help users recognize, diagnose, and recover from errors**

- Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10. **Help and documentation**

- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Heuristic Evaluation - Rating System

Severity Ratings (Nielsen, 1995: <http://www.nngroup.com/articles/how-to-rate-the-severity-of-usability-problems/>)

The severity of a usability problem is a combination of three factors:

- The **frequency** with which the problem occurs: Is it common or rare?
- The **impact** of the problem if it occurs: Will it be easy or difficult for the users to overcome?
- The **persistence** of the problem: Is it a one-time problem that users can overcome once they know about it or will users repeatedly be bothered by the problem?

The following 0 to 4 rating scale can be used to rate the severity of usability problems:

0 = **I don't agree** that this is a usability problem at all

1 = **Cosmetic problem only**: need not be fixed unless extra time is available on project

2 = **Minor usability problem**: fixing this should be given low priority

3 = **Major usability problem**: important to fix, so should be given high priority

4 = **Usability catastrophe**: imperative to fix this before product can be released

Heuristic Evaluation – Form

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Project Title: Kinect Body Scanner

Interface	Issue	Heuristic(s)	Frequency 0 (rare) to 4 (common)	Impact 0 (easy) to difficult (4)	Persistence 0 (once) to 4 (repeated)	Severity = Sum Total of F+I+P /3
Result Screen	The result screen only shows a barcode and doesn't show the actual result.	Aesthetic and Minimalist Design.	4	2	3	3
Error Screen	There is no error screen, in case something goes wrong with the scan	Error Prevention	0	4	3	2
After scan screen	There is no screen to indicate that the scan is over, and the system is "analysing..." the scan	Visibility of System Status	3	2	2	2
Scanning Screen	The stop and help button disappear in the scanning screen. If the user panics, then there should be away to stop everything.	User control and freedom	0	2	1	1
Result Screen	No option to discard the last scan, especially if the user is unhappy with the scan.	User control and freedom	2	2	3	2
"No Body Detected" screen	The "No Body Detected" is harsh can be insensitive, if the Kinect wrongly doesn't detect a human body, despite a person being there.	Help users recognize, diagnose, and recover from errors	0	3	1	1

