

Heuristic Evaluation

Assessment Guide and Checklist



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Introduction

SUMMARY OF HEURISTICS

Heuristic		Description
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	<p>The system should speak the user's language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.</p> <p>Follow real-world conventions, making information appear in a natural and logical order.</p>
3	User control and freedom	<p>Users should be free to select and sequence tasks (when appropriate), rather than having the system do this for them.</p> <p>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.</p> <p>Users should make their own decisions (with clear information) regarding the costs of exiting current work. The system should support undo and redo.</p>
4	Consistency and standards	Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions .
5	Help users recognize, diagnose, and recover from errors	<p>Even better than good error messages is a careful design which prevents a problem from occurring in the first place.</p> <p>Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action. (Read full article on preventing user errors.)</p>
6	Error prevention	Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Heuristic		Description
7	Recognition rather than recall	<p>Minimize the user's memory load by making objects, actions, and options visible.</p> <p>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.</p> <p>(Read full article on recognition vs. recall in UX.)</p>
8	Flexibility and efficiency of use	<p>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.</p>
9	Aesthetic and minimalist design	<p>Dialogues should not contain information which is irrelevant or rarely needed.</p> <p>Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.</p>
10	Help and documentation	<p>Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.</p> <p>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.</p>
11	Skills	<p>The system should support, extend, supplement, or enhance the user's skills, background knowledge, and expertise - not replace them.</p>
12	Pleasurable and respectful interaction with the user	<p>The user's interactions with the system should enhance the quality of her or his work-life. The user should be treated with respect.</p> <p>The design should be aesthetically pleasing- with artistic as well as functional value.</p>
13	Privacy	<p>The system should help the user to protect personal or private information- belonging to the user or the his/her clients.</p>

IMPORTANT NOTES

This assessment guide and checklist has been compiled and modified from:

- Neilson Norman 10 Heuristics
- Making Computers-People Literate. © Copyright 1993. By Elaine Weiss ISBN: 0-471-01877-5
- Usability Inspection Methods. © Copyright 1994. By Jakob Nielsen and Robert Mack ISBN: 1-55542-622-0
- <http://www.stcsig.org/usability/topics/articles/he-checklist.html>- By Deniese Pierotti, Xerox Corporation

Results Summary

PASSED/FAILED – BY HEURISTIC

Heuristic		# passed	# failed	# n/a
1	Visibility of system status	/14	/14	/14
2	Match between system and the real world	/15	/15	/15
3	User control and freedom	/18	/18	/18
4	Consistency and standards	/39	/39	/39
5	Help users recognize, diagnose, and recover from errors	/17	/17	/17
6	Error prevention	/10	/10	/10
7	Recognition rather than recall	/31	/31	/31
8	Flexibility and efficiency of use	/16	/16	/16
9	Aesthetic and minimalist design	/14	/14	/14
10	Help and documentation	/11	/11	/11
11	Skills	/12	/12	/12
12	Pleasurable and respectful interaction with the user	/12	/12	/12
13	Privacy	/4	/4	/4
Totals:		/211	/211	/211

NIELSONS RATING SCALE – BY HEURISTIC

- 4 = Usability blocker
- 3 = Major usability problem
- 2 = Minor usability problem
- 1 = Cosmetic problem only

Heuristic	Total # - usability blockers	Total # - major usability problems	Total # - minor usability problems	Total # - cosmetic problems
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

1. Visibility of system status

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

#	Item	N/A	Pass	Fail	Rating	Comments
1.1	Does every screen begin with a title or header that describes the page contents?					
1.2	In multipage data entry screens, is each page titled uniquely to show its relation to others? (ex. multi-page flow, each page has a descriptive title i.e. Step 1 of 3 etc.)					
1.3	Is there a consistent icon design scheme & treatment across the system?					
1.4	Is the current status of an icon clearly indicated? (ex. enabled/disabled; selected/not selected)					
1.5	Do instructions, prompts (ex. confirmation messages), and error messages appear in the same place(s)?					
1.6	Is there some form of system feedback for every important user action? (ex - success messages, error messages, new screen, visual/textual change, or visible selection)					
1.7	Is there visual feedback about which elements or choices are selectable?					
1.8	If multiple options can be selected, is there visual feedback about which options are already selected? (ex. multi select combo boxes)					
1.9	Is there visual feedback when objects are selected or moved? (ex. drag & drop; expand & collapse)					

#	Item	N/A	Pass	Fail	Rating	Comments
1.10	If there are observable delays in the system's response time, is the user kept informed of the system's progress?					
1.11	Are response times appropriate to the task?					
1.12	Is all of the terminology consistent with the user's task domain? (ex. common business vocabulary used throughout)					
1.13	Can the user tell the status of the system/page and the alternatives for action?					
1.14	Does the system make use of navigational aids? (ex. skipnav links, breadcrumbs, exit/cancel/close/go back buttons)					
Total: 14						

2. Match between system and the real world

The system should speak the user's 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.

#	Item	N/A	Pass	Fail	Rating	Comments
2.1	Are icons concrete and familiar?					
2.2	If there is a natural sequence to menu choices, has it been used?					
2.3	Are related and interdependent fields grouped logically on the page?					
2.4	If shape is used as a visual cue (ex: stop sign, warning etc), does it match cultural conventions?					
2.5	Do the selected colors correspond to common expectations about color codes?					
2.6	When prompts imply a necessary action, are the words in the message consistent with that action?					
2.7	On data entry screens, is the information stated in clear, simple language?					
2.8	Are field-level prompts provided for data entry screens?					
2.9	Do menu choices fit logically into categories that have readily understood meanings?					
2.10	Are command names specific rather than general?					
2.11	Does the system automatically enter leading or trailing spaces to align decimal points?					
2.12	Does the system automatically enter a dollar sign and decimal for monetary entries?					

#	Item	N/A	Pass	Fail	Rating	Comments
2.13	Does the system format numeric values greater than 9999? (ex: commas in English, spaces in French)					
2.14	Do GUI menus offer activation: that is, make obvious how to say "now do it"?					
2.15	Has the system been designed so that keys/buttons with similar names or appearance do not perform opposite (and potentially dangerous) actions?					
Total: 15						

3. User control and freedom

Users should be free to select and sequence tasks (when appropriate), rather than having the system do this for them.

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.

Users should make their own decisions (with clear information) regarding the costs of exiting current work. The system should support undo and redo.

#	Item	N/A	Pass	Fail	Rating	Comments
3.1	If setting up windows is a low-frequency task, is it particularly easy to remember?					
3.2	In systems that use overlapping windows, is it easy for users to rearrange windows on the screen, and/or switch between windows?					
3.3	When a user's task is complete, does the system wait for a signal from the user before processing?					
3.4	Can users type-ahead in a system with many nested menus?					
3.5	Are users prompted to confirm commands that have drastic, destructive consequences?					
3.6	Is there an "undo" function at the level of a single action, a data entry, and a complete group of actions?					
3.7	Can users cancel out of operations in progress?					
3.8	Can users reduce data entry time by copying and modifying existing data?					
3.9	Are character edits allowed in data entry fields?					
3.10	If menu lists are long (more than seven items), can users select an item either by moving the cursor or by typing a mnemonic code?					

#	Item	N/A	Pass	Fail	Rating	Comments
3.11	If the system uses a pointing device, do users have the option of either clicking on menu items or using a keyboard shortcut?					
3.12	Are menus broad (many items on a menu) rather than deep (many menu levels)?					
3.13	If the system has multiple menu levels, is there a mechanism that allows users to go back to previous menus?					
3.14	If users can go back to a previous menu, can they change their earlier menu choice?					
3.15	Can users move forward and backward between fields or dialog box options?					
3.16	If the system has multipage data entry screens, can users move backward and forward among all the pages in the set?					
3.17	If the system allows users to reverse their actions, is there a retracing mechanism to allow for multiple undos?					
3.18	Can users set their own system, session, file, and screen defaults?					
Total: 18						

4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow [platform conventions](#).

#	Item	N/A	Pass	Fail	Rating	Comments
4.1	Have industry or company formatting standards been followed consistently in all screens within a system?					
4.2	Has a heavy use of all uppercase letters on a screen been avoided?					
4.3	Are integers right-justified and real numbers decimal-aligned?					
4.4	Are icons labeled?					
4.5	Are there salient visual cues to identify the active window?					
4.6	Does each window have a title?					
4.7	Are vertical and horizontal scrolling possible where necessary?					
4.8	Does the menu structure match the task structure?					
4.9	Have industry or company standards been established for menu design, and are they applied consistently on all menu screens in the system?					
4.10	Are menu choice lists presented vertically?					
4.11	If "exit" is a menu choice, does it always appear at the bottom of the list?					
4.12	Are menu titles either centered or left-justified?					
4.13	Are menu items left-justified, with the item number or mnemonic preceding the name?					
4.14	Do embedded field-level prompts appear to the right of the field label?					

#	Item	N/A	Pass	Fail	Rating	Comments
4.15	Do on-line instructions appear in a consistent location across screens?					
4.16	Are field labels and fields distinguished typographically?					
4.17	Are field labels consistent from one data entry screen to another?					
4.18	Are fields and labels left-justified for alpha lists and right-justified for numeric lists?					
4.19	Do field labels appear to the left of single fields and above list fields?					
4.20	Size: up to four sizes					
4.21	Font: up to three					
4.22	Blink: two to four hertz					
4.23	Color: up to four (additional colors for occasional use only), and are they far apart along the visible spectrum?					
4.24	Sound: soft tones for regular positive feedback, harsh for rare critical conditions					
4.25	Is a legend provided if color codes are numerous or not obvious in meaning?					
4.26	Have pairings of high-chroma, spectrally extreme colors been avoided?					
4.27	Are saturated blues avoided for text or other small, thin line symbols?					
4.28	Is the most important information placed at the beginning of the instructions/information/action texts?					
4.29	Are user actions named consistently across all instructions/information/action texts in the system?					

#	Item	N/A	Pass	Fail	Rating	Comments
4.30	Are commands used the same way, and do they mean the same thing, in all parts of the system?					
4.31	Are system objects named consistently across all instructions/information/action texts in the system?					
4.32	For question and answer interfaces, are the valid inputs for a question listed?					
4.33	Are menu choice names consistent, both within each menu and across the system, in grammatical style and terminology?					
4.34	Does the structure of menu choice names match their corresponding menu titles?					
4.35	Does the command language have a consistent, natural, and mnemonic syntax?					
4.36	Is the structure of a data entry value consistent from screen to screen?					
4.37	Is the method for moving the cursor to the next or previous field consistent throughout the system?					
4.38	If the system has multipage data entry screens, do all pages have the same title?					
4.39	If the system has multipage data entry screens, does each page have a sequential page number?					
Total: 39						

5. Help users recognize, diagnose, and recover from errors

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. (Read full article on [preventing user errors](#).)

#	Item	N/A	Pass	Fail	Rating	Comments
5.1	Is sound used to signal an error?					
5.2	Are prompts stated constructively, without overt or implied criticism of the user? (ie: avoids using 'you' in the wording)					
5.3	Do prompts imply that the user is in control?					
5.4	Are prompts brief and unambiguous.					
5.5	If humorous error messages are used, are they appropriate and inoffensive to the user population?					
5.6	Are error messages grammatically correct?					
5.7	Do error messages avoid the use of exclamation points?					
5.8	Do error messages avoid the use of violent or hostile words?					
5.9	Do error messages avoid a robotic tone?					
5.10	Do all error messages in the system use consistent grammatical style, form, terminology, and abbreviations?					
5.11	Does the command language use normal action-object syntax?					
5.12	Does the command language avoid arbitrary, non-English use of punctuation, except for symbols that users already know?					

#	Item	N/A	Pass	Fail	Rating	Comments
5.13	If an error is detected in a data entry field, does the system place the cursor in that field or highlight the error?					
5.14	Do error messages inform the user of the error's severity?					
5.15	Do error messages suggest the cause of the problem?					
5.16	Do error messages indicate what action the user needs to take to correct the error?					
5.17	If the system supports both novice and expert users, are multiple levels of error-message detail available?					
Total: 17						

6. Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

#	Item	N/A	Pass	Fail	Rating	Comments
6.1	If the page includes groups of data, can users enter more than one group on a single screen?					
6.2	Is the menu choice name on a higher-level menu used as the menu title of the lower-level menu?					
6.3	Are menu choices logical, distinctive, and mutually exclusive?					
6.4	Are data inputs case-blind whenever possible?					
6.5	Do data entry screens and dialog boxes indicate the number of character spaces available in a field?					
6.6	Do fields in data entry screens and dialog boxes contain default values when appropriate?					
6.7	If the system displays multiple windows, is navigation between windows simple and visible?					
6.8	Does the system prevent users from making errors whenever possible?					
6.9	Does the system warn users if they are about to make a potentially serious error?					
6.10	Does the system intelligently interpret variations in user commands?					
Total: 10						

7. 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.

(Read full article on [recognition vs. recall in UX](#).)

#	Item	N/A	Pass	Fail	Rating	Comments
7.1	Are visual cues and white space used to distinguish questions, prompts, instructions, and user input?					
7.2	Does the data display start in the upper-left corner of the screen?					
7.3	Are multiword field labels placed horizontally when space allows?					
7.4	Are all data a user needs on display at each step in a transaction sequence?					
7.5	Are prompts, cues, and messages placed where the eye is likely to be looking on the screen?					
7.6	Have prompts been formatted using white space, justification, and visual cues for easy scanning?					
7.7	Do text areas have "breathing space" around them?					
7.8	Is there an obvious visual distinction made between "choose one" menu and "choose many" menus?					
7.9	Does the system gray out or delete labels of inactive fields and/or buttons?					
7.10	Have items been grouped into logical zones, and have headings been used to distinguish between zones?					

#	Item	N/A	Pass	Fail	Rating	Comments
7.11	Have zones been separated by spaces, lines, color, letters, bold titles, rules lines, or shaded areas?					
7.12	Are field labels close to fields, but separated by at least one space?					
7.13	Are long columnar fields broken up into groups of five, separated by a blank line?					
7.14	Are optional data entry fields clearly marked?					
7.15	Are symbols used to break long input strings into "chunks"?					
7.16	Is reverse video or color highlighting used to get the user's attention?					
7.17	Is reverse video used to indicate that an item has been selected?					
7.18	Are size, boldface, underlining, color, shading, or typography used to show relative quantity or importance of different screen items?					
7.19	Are borders used to identify meaningful groups?					
7.20	Has the same color been used to group related elements?					
7.21	Is color coding consistent throughout the system?					
7.22	Is color used in conjunction with some other redundant cue?					
7.23	Is there good color and brightness contrast between image and background colors?					
7.24	Have light, bright, saturated colors been used to emphasize data and have darker, duller, and desaturated colors been used to de-emphasize data?					
7.25	Is the first word of each menu choice the most important?					

#	Item	N/A	Pass	Fail	Rating	Comments
7.26	Does the system provide mapping: that is, are the relationships between controls and actions apparent to the user?					
7.27	Are input data codes distinctive?					
7.28	Are inactive menu items grayed out or omitted?					
7.29	Are there menu selection defaults?					
7.30	Are there salient visual cues to identify the active window?					
7.31	On data entry screens and dialog boxes, are dependent fields displayed only when necessary?					
Total: 31						

8. 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.

#	Item	N/A	Pass	Fail	Rating	Comments
8.1	Navigation: Is information easy to find?					
8.2	Presentation: Is the visual layout well designed?					
8.3	Conversation: Is the information accurate, complete, and understandable?					
8.4	Goal-oriented (What can I do with this program?)					
8.5	Descriptive (What is this thing for?)					
8.6	Procedural (How do I do this task?)					
8.7	Interpretive (Why did that happen?)					
8.8	Navigational (Where am I?)					
8.9	Does the system allow novice users to enter the simplest, most common form of each command, and allow expert users to add parameters?					
8.10	Do expert users have the option of entering multiple commands in a single string?					
8.11	For data entry screens with many fields or in which source documents may be incomplete, can users save a partially filled screen?					
8.12	Does the system automatically enter leading zeros?					
8.13	On data entry screens, do users have the option of either clicking directly on a field or using a keyboard shortcut?					

#	Item	N/A	Pass	Fail	Rating	Comments
8.14	On menus, do users have the option of either clicking directly on a menu item or using a keyboard shortcut?					
8.15	In dialog boxes, do users have the option of either clicking directly on a dialog box option or using a keyboard shortcut?					
8.16	Can expert users bypass nested dialog boxes with either type-ahead, user-defined macros, or keyboard shortcuts?					
Total: 16						

9. 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.

#	Item	N/A	Pass	Fail	Rating	Comments
9.1	Is only (and all) information essential to decision making displayed on the screen?					
9.2	Are all icons in a set visually and conceptually distinct?					
9.3	Has excessive detail in icon design been avoided?					
9.4	Have large objects, bold lines, and simple areas been used to distinguish icons?					
9.5	Does each icon stand out from its background?					
9.6	If the system uses a standard GUI interface where menu sequence has already been specified, do menus adhere to the specification whenever possible?					
9.7	Are meaningful groups of items separated by white space?					
9.8	Is white space used to create symmetry and lead the eye in the appropriate direction?					
9.9	Does each data entry screen have a short, simple, clear, distinctive title?					
9.10	Are field labels brief, familiar, and descriptive?					
9.11	Are prompts expressed in the affirmative, and do they use the active voice?					
9.12	Is each lower-level menu choice associated with only one higher level menu?					
9.13	Are menu titles brief, yet long enough to communicate?					

#	Item	N/A	Pass	Fail	Rating	Comments
9.14	Are there pop-up or pull-down menus within data entry fields that have many, but well-defined, entry options?					
Total: 14						

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.

#	Item	N/A	Pass	Fail	Rating	Comments
10.1	Are the instructions task-specific and follow the sequence of user actions?					
10.2	If menu choices are ambiguous, does the system provide additional explanatory information when an item is selected?					
10.3	Are data entry screens and dialog boxes supported by navigation and completion instructions?					
10.4	Are there memory aids for commands, either through on-line quick reference or prompting?					
10.5	Is the help function visible; for example, a key labeled HELP or a special menu?					
10.6	Is the help system interface (navigation, presentation, and conversation) consistent with the navigation, presentation, and conversation interfaces of the application it supports?					
10.7	Is there context-sensitive help?					
10.8	Can the user change the level of detail available?					
10.9	Can users easily switch between help and their work?					
10.10	Is it easy to access and return from the help system?					
10.11	Can users resume work where they left off after accessing help?					

#	Item	N/A	Pass	Fail	Rating	Comments
Total: 11						

11. Skills

The system should support, extend, supplement, or enhance the user's skills, background knowledge, and expertise - not replace them.

#	Item	N/A	Pass	Fail	Rating	Comments
11.1	Can users choose between iconic and text display of information?					
11.2	Are window operations easy to learn and use?					
11.3	If users are experts, usage is frequent, or the system has a slow response time, are there fewer screens (more information per screen)?					
11.4	If users are novices, usage is infrequent, or the system has a fast response time, are there more screens (less information per screen)?					
11.5	Does the system automatically color-code items, with little or no user effort?					
11.6	If the system supports both novice and expert users, are multiple levels of detail available.					
11.7	Are users the initiators of actions rather than the responders?					
11.8	Do field values avoid mixing alpha and numeric characters whenever possible?					
11.9	When the user enters a screen or dialog box, is the cursor already positioned in the field users are most likely to need?					
11.10	Can users move forward and backward within a field?					
11.11	Is the method for moving the cursor to the next or previous field both simple and visible?					
11.12	Does the system correctly anticipate and prompt for the user's probable next activity?					
Total: 12						

12. Pleasurable and respectful interaction with the user

The user's interactions with the system should enhance the quality of her or his work-life. The user should be treated with respect.

The design should be aesthetically pleasing- with artistic as well as functional value.

#	Item	N/A	Pass	Fail	Rating	Comments
12.1	Is each individual icon a harmonious member of a family of icons?					
12.2	Has color been used with discretion?					
12.3	Has the amount of required window housekeeping been kept to a minimum?					
12.4	If users are working from hard copy, does the screen layout match the paper form?					
12.5	Has color been used specifically to draw attention, communicate organization, indicate status changes, and establish relationships?					
12.6	Are typing requirements minimal for question and answer interfaces?					
12.7	If the system uses multiple input devices, has hand and eye movement between input devices been minimized?					
12.8	If the system supports graphical tasks, has an alternative pointing device been provided?					
12.9	Does the system complete unambiguous partial input on a data entry field?					
Total: 9						

13. Privacy

The system should help the user to protect personal or private information- belonging to the user or the his/her clients.

#	Item	N/A	Pass	Fail	Rating	Comments
13.1	Has the user been informed how their personal information will be collected and used?					
13.2	Are protected areas completely inaccessible?					
13.3	Can protected or confidential areas be accessed with certain passwords?					
13.4	Is this feature effective and successful?					
Total: 4						