

Appendix: Questionnaire

Id	Qualitative statement	Reference
U	Utility	
U.1	How do you use the software in your job?	[13]
U.2	What is the use of the software?	[20]
U-I	Dependability	
U-I.1	What can you say about your confidence in the software?	[17]
U-I.2	What do you think about the software's security?	[19]
U-I.3	What do you think about the software's reliability?	[15]
U-I.4	Who initiates the sequence control?	[14]
U-I.5	Who is in command of this software?	[16]
U-II	Ease of Use	
U-II.1	How do you reach your goals with the software?	[16]
U-II.2	How can you shift among different windows?	[5], [14]
U-II.3	How can you change between different parts of your tasks?	[5], [7], [16]
U-II.4	How do you find required information with this software?	[4]
U-II.5	What kind of help did you need before using the software?	[17]
U-II.6	What do you think about the understandability of information?	[4]
U-II.7	Which parts of the software are easy to use?	[13], [17], [20]
U-II.8	Which parts of the software are cumbersome to use?	[15], [17]
U-II.9	Why is the use of this software simple?	[20]
U-III	Effectiveness	
U-III.1	How can you effectively work with this software?	[4]
U-III.2	How helps the information you in completing your tasks?	[4]
U-III.3	To what extend enhances the software your effectiveness?	[13]
U-III.4	What is the software's influence on your effectiveness?	[20]
U-IV	Efficiency	[8]
U-IV.1	How hard did you struggle to accomplish your aims?	[18]
U-IV.2	How many steps do you need to accomplish your aims?	[5], [20]
U-IV.3	How cumbersome is the cursor positioning?	[14]
U-IV.4	How is the minimization of steps in menus done?	[14]
U-IV.5	How extensive are the user control actions?	[14]
U-IV.6	How are frequent control entries accessed?	[5], [14]
U-IV.7	How can the user return to higher-level menus?	[14]
U-IV.8	To what extend unnecessary inputs have to entered?	[7], [14]
U-IV.9	To what extend does the software interrupt your tasks?	[7]
U-IV.10	To what extend is the software economic with keystrokes?	[16]
U-IV.11	What do you think about the response to your inputs?	[16]
U-IV.12	What do you think about the software's speed?	[13], [15], [16]
U-IV.13	What kind of shortcuts are provided?	[9]
U-IV.14	What influence has the software on process times?	[19], [20]
U-IV.15	What kind of default values are available?	[14]
U-IV.15	What kind of searches are available?	[14]
U-IV.16	What can you say about the efficiency of this software?	[4], [7], [19]
U-V	Productivity	
U-V.1	How is the accomplishment of your tasks supported?	[20]
U-V.2	How long did it take until you became productive?	[4]
U-V.3	How do you get something to work?	[16]
U-V.4	How are connected work packages handled?	[5]
U-V.5	How does the visualization support the handling of your tasks?	[5]
U-V.6	How can this software be used in an optimal way?	[5]
U-V.7	How successful were you in accomplishing your tasks?	[18], [20]
U-V.8	To what extend is the software practical?	[2]
U-V.9	To what extend is the solution of your tasks supported?	[5]
U-V.10	What is the software's influence on your productivity?	[13], [20]

Id	Qualitative statement	Reference
J	Intuitiveness	
J-I	Affordance	
J-I.1	How understandable is the wording in the software?	[5]
J-I.2	How does the software indicate which inputs are possible?	[7]
J-I.3	How dependent are you on written instructions?	[20]
J-I.4	To what extend are the command names meaningful?	[14]
J-I.5	To what extend is this deactivation of elements clearly visible?	[5]
J-I.6	To what extend can software used without documentation?	[12]
J-I.7	What kind of affordances are provided by the software?	[12]
J-I.8	What do you think about the mapping of functionalities?	[12]
J-I.9	Which terms, abbreviations or symbols are complicated?	[7]
J-II	Expectations	
J-II.1	How easy can you get things done which you want to do?	[13], [20]
J-II.2	To what extend does the software meet your expectations?	[5], [19]
J-II.3	To what extend is the software predictable?	[2], [5]
J-II.4	To what extend are the process times predictable?	[5], [7]
J-II.5	What is the relation between expectations and behavior?	[14], [20]
J-II.6	When did the software not do what you were expecting?	[16]
J-II.7	When did the software stop unexpectedly?	[16]
J-II.8	Which functions and capabilities do you expect?	[4]
J-III	Conventions	
J-III.1	How is the menu selection done?	[14]
J-III.2	How are abbreviations and acronyms used?	[14]
J-III.3	How is the consistency with user conventions guaranteed?	[14]
J-III.4	To what extend is the software compatible with conventions?	[2], [14], [19]
J-III.5	To what extend are the color codes conventional?	[14]
J-III.6	To what extend uses the software existing knowledge?	[12]
J-III.7	To what extend is the wording familiar?	[14]
J-III.8	To what extend is graphic data connected with symbols?	[14]
J-IV	Transparency	
J-IV.1	How is a way to preview "what will happen" provided?	[12]
J-IV.2	To what extend is the software not understandable?	[19]
J-IV.3	To what extend is the effect of actions transparent?	[5]
J-IV.4	When did the software behave in an incomprehensible way?	[16]
M	Memorability	[8]
M.1	How is the memory load minimized by the software?	[9], [12]
M.2	How many details have you to remember?	[5], [7]
M.3	How easy is it to find the important commands and actions?	[5]
M.4	How easy is it to remember trained sequences?	[5], [7], [20]
M.5	How memorable is the naming of the menu items?	[14], [15]
M.6	To what extend are data items kept short?	[14]
M.7	To what extend verbal labels for icons are provided?	[14]
M.8	When are prior answers recapitulated by the software?	[14]
M-I	Consistency	[9]
M-I.1	How is the integration of the various functions done?	[5], [17]
M-I.2	How is the unambiguousness of terms and actions guaranteed?	[12]
M-I.3	How is the consistency of control and action guaranteed?	[5], [14]
M-I.4	How consistent is the interaction with the user?	[14]
M-I.5	How consistent are the different views in the software?	[14]
M-I.6	How consistent is the format of the display?	[14]
M-I.7	How can related data entered with this software?	[14]
M-I.8	How consistent is the formatting of the data fields?	[14]
M-I.9	In what manner can the tasks performed with this software?	[15], [16]
M-I.10	To what extend is the option wording consistent?	[14]

Id	Qualitative statement	Reference
M-I.11	To what extend is the software consistent to standards?	[12]
M-I.12	To what extend is the labeling of items consistent?	[5], [14], [15]
M-I.13	To what extend is the orientation of the display consistent?	[14]
M-I.14	To what extend is the positioning of messages consistent?	[5], [15]
M-I.15	To what extend is the general design consistent?	[5], [7]
M-I.16	To what extend are the interaction paradigms consistent?	[7]
M-I.17	What inconsistencies did you notice in this software?	[16], [17], [20]
M-II	Customizability	
M-II.1	How is the customization of windows facilitated?	[5], [14]
M-II.2	How is the individual assignment of command names done?	[14]
M-II.3	How is the matching of software and user's skills done?	[14]
M-II.4	How are recurring processes supported?	[7]
M-II.5	To what extend meets the software your needs?	[20]
M-II.6	To what extend is the software suitable for regular users?	[14], [15], [20]
M-II.7	To what extend is the software suitable for occasional users?	[14], [15], [20]
M-II.8	To what extend adapts the software to your knowledge?	[5], [7]
M-II.9	To what extend are the user's needs taken into consideration?	[16]
M-II.10	To what extend is the data entry flexible?	[14]
M-II.11	To what extend is the sequence control flexible?	[5], [7], [14]
M-II.12	To what extend can the speed of the software adapted?	[5]
M-II.13	To what extend can the software dynamically extended?	[7]
M-II.14	To what extend can the software's output adapted?	[5], [7]
M-II.15	To what extend adopts the software the user's viewpoint?	[5], [7], [12]
M-II.16	What do you think about the software's flexibility?	[13], [15], [20]
M-II.17	When was the way you arrange your work disrupted?	[16]
M-II.18	Which parts of the software are rigid?	[5]
M-III	Complexity	
M-III.1	How complex is the software?	[17]
M-III.2	How complicated is the usage of the software?	[7], [19]
M-III.3	How easy is it to forget how to do things with this software?	[16]
M-III.4	How is the straightforward solution of problems supported?	[2]
M-III.5	How dependent are you on assistance?	[16]
M-III.6	To what extend do you limit yourself on a few commands?	[16]
M-III.7	To what extend is the functionality limited?	[14]
M-III.8	To what extend can you remember complex functions?	[5]
M-III.9	What information do you have to remember across dialogs?	[12]
M-III.10	Which parts of the software are simple?	[2]
M-III.11	With which parts of the software are you unfamiliar?	[16]
M-IV	Perspiciuity	
M-IV.1	How is selected data highlighted?	[14]
M-IV.2	How are long data items partitioned?	[14]
M-IV.3	How are the available options communicated to the user?	[16]
M-IV.4	How is the cursor made distinctive?	[14]
M-IV.5	How are the display elements made distinctive?	[14]
M-IV.6	How is direct comparison of items facilitated?	[14]
M-IV.7	How do menus differ from other displayed information?	[14]
M-IV.8	How is information grouped and organized?	[14], [15]
M-IV.9	How is the readability of characters guaranteed?	[15]
M-IV.10	To what extend is the information cluttered?	[19]
M-IV.11	To what extend is the wording clear?	[14]
M-IV.12	To what extend is the grouping and ordering of item logical?	[14], [16]
M-IV.13	To what extend is the presented information understandable?	[16]
M-IV.14	To what extend are the abbreviations distinctive?	[14]
M-IV.15	To what extend have the commands distinctive meanings?	[14]

Id	Qualitative statement	Reference
M-IV.16	To what extend can the colors be distinguished?	[14]
M-IV.17	To what extend are data fields visually distinctive?	[14]
M-IV.18	To what extend is the information density reasonable?	[4], [5], [14]
M-IV.19	To what extend is the sequence of screens clear?	[15]
M-IV.20	What parts of the software are confusing?	[2], [15], [19]
L	Learnability	[8]
L.1	How easy is it to learn to work with the software?	[5], [13], [15]
L.2	How easy is it to become skillful with the software?	[4], [5], [13]
L.3	How many things had you to learn before using this software?	[17]
L.4	How many problems had you during the learning phase?	[16]
L.5	How long does it take to learn the software commands?	[16], [20]
L.6	How difficult is the learning of new functionalities?	[16], [20]
L.7	How is the learning supported by the software structure?	[14]
L.8	To what extend is no-penalty learning supported?	[14]
L.9	To what extend can users quickly learn to use this software?	[7], [17]
L.10	To what extend had you to ask other persons for help?	[5]
L.12	What parts of the software are difficult to learn?	[19]
L-I	Error handling	[8]
L-I.1	How are errors prevented?	[9], [12]
L-I.2	How hinders the software the user from making errors?	[12]
L-I.3	How is the error recovery performed?	[9], [12], [20]
L-I.4	How can you leave an undesirable state?	[12]
L-I.5	How can operations canceled?	[14]
L-I.6	How can errors corrected in this software?	[14]
L-I.7	How is the repeated occurrence of an error indicated?	[14]
L-I.8	How can the software restarted?	[14], [16]
L-I.9	How can the user take back actions?	[5], [14]
L-I.10	How is the user warned against dangerous actions?	[5]
L-I.11	How is distinguished between feedback, warnings and errors?	[5]
L-I.12	How is guaranteed that no information gets lost?	[5]
L-I.13	How often lead errors to crashes of the software?	[5]
L-I.14	To what extend does the software assume that errors are made?	[12]
L-I.15	To what extend are error messages non-disruptive?	[5], [14]
L-I.16	To what extend can mistakes corrected?	[15]
L-I.17	To what extend can the software be explored by trial and error?	[15]
L-I.18	To what extend are the error messages helpful?	[4], [7], [15]
L-I.19	To what extend have error minor consequences?	[4], [5], [7]
L-I.20	To what extend information on error recovery is provided?	[5], [7]
L-I.21	To what extend is the aborting of processes possible?	[5], [7]
L-I.22	What error messages are provided?	[9], [12], [14]
L-I.23	What solutions are available in case of an error?	[12]
L-I.24	When is the user informed about wrong inputs?	[7]
L-II	Feedback	[9], [12]
L-II.1	How timely is the feedback about the processes?	[5], [12]
L-II.2	How are erroneous entries displayed?	[14]
L-II.3	How is feedback for control entries provide?	[14]
L-II.4	How is the completion of processing indicated?	[14]
L-II.5	How is the current position in menu structure indicated?	[14]
L-II.6	How does the computer inform about its progress?	[15]
L-II.7	How is the active window indicated?	[14]
L-II.8	How is the feedback linked with the actions?	[5]
L-II.9	How is the visual feedback designed?	[5]
L-II.10	In which cases is no feedback available?	[7]
L-II.11	To what extend is the feedback consistent?	[14]

Id	Qualitative statement	Reference
L-II.12	To what extend are instructions and prompts helpful?	[16]
L-II.13	To what extend simplifies the highlighting the tasks?	[15]
L-II.14	To what extend is the feedback understandable?	[5]
L-II.15	To what extend is the feedback adapted to the situation?	[7]
L-III	Help	[9], [12]
L-III.1	How are additional explanations accessed?	[5]
L-III.2	How task-oriented is the help provided by the software?	[12]
L-III.3	How has the software helped you to overcome your problems?	[16]
L-III.4	How is help provided?	[14]
L-III.5	How useful is the help information given by this software?	[16]
L-III.6	How is an index of commands displayed?	[14]
L-III.7	How is an index of data displayed?	[14]
L-III.8	To what extend varies the amount or quality of help?	[16]
L-III.9	To what extend is the documentation informative.	[16]
L-III.10	To what extend aids for entering data are provided?	[5], [14]
L-III.11	To what extend are the help messages useful?	[15]
L-III.12	To what extend are the reference materials clear?	[15]
L-IV	User Guidance	
L-IV.1	How does the software support the learning of the software?	[5]
L-IV.2	How can you explore new functions?	[5]
L-IV.3	How are all available possibilities displayed?	[5]
L-IV.4	How is an overview on valid inputs provided?	[5]
L-IV.5	How much do you have to read before using the software?	[16]
L-IV.6	How usable is the software without documentation?	[7]
L-IV.7	To what extend overview maps and trails are provided?	[12]
L-IV.8	To what extend is the wording of the user guidance consistent?	[14]
L-IV.9	To what extend can you act on basis of the information?	[16]
L-IV.10	To what extend is the user guidance flexible?	[14]
L-IV.11	To what extend is the format of user guidance distinctive?	[14]
L-IV.12	To what extend examples are provided beside explanations?	[5]
L-IV.13	To what extend situation specific explanations are provided?	[7]
L-IV.14	When did you not know what to do next with this software?	[16]
L-IV.15	When was the guidance information not available?	[14]
L-IV.16	When had you to go back to look at the guides?	[16]
P	Personal Effect	
P.1	To what extend is the software leading?	[19]
P.2	What makes the software user friendly?	[19]
P-I	Attractiveness	
P-I.1	To what extend is this software wonderful?	[20]
P-I.2	To what extent is this software pleasant to use?	[4], [19], [20]
P-I.3	To what extend is this software professional?	[2]
P-I.4	To what extend is this software premium?	[2]
P-I.5	To what extend is this software awkward?	[16]
P-I.6	What is the value of this software?	[19]
P-I.7	Which part of the software is stylish?	[2]
P-I.8	Which part of this software is wonderful?	[15], [19]
P-I.9	Which part of this software is stimulating?	[15]
P-I.10	Which part of the presentation is attractive?	[16]
P-I.11	Why is this software interesting?	[19]
P-I.12	Why is this software presentable?	[2]
P-I.13	Why do you need to have this software?	[20]
P-II	Novelty	
P-II.1	How is this software designed for advancement?	[12]
P-II.2	To what extend is this software creative?	[2]

Id	Qualitative statement	Reference
P-II.3	To what extend is this software dull	[19]
P-II.4	What are the novel parts in this software?	[2]
P-II.5	Which part of this software is innovative?	[2], [19]
P-III	Satisfaction	[8]
P-III.1	How comfortable do you feel using this software?	[4]
P-III.2	How frustrating is the interaction with the software?	[15]
P-III.3	How satisfied are you with the support information?	[1]
P-III.4	How frequent would you like to use this software?	[17]
P-III.5	How connects this software you with other people?	[2]
P-III.6	To what extend is this software mentally stimulating?	[16]
P-III.7	To what extend is working with this software satisfying?	[1], [16], [20]
P-III.8	To what extend is this software exiting?	[19]
P-III.9	To what extend are you satisfied with the ease of use?	[1], [4]
P-III.10	What makes the work with this software motivating?	[19]
P-III.11	Which part of this software do you enjoy?	[4], [16], [20]
P-III.12	Why would you recommend this software to your colleagues?	[16], [20]
P-IV	Stress	
P-IV.1	How mentally demanding is the software?	[18]
P-IV.2	How physically demanding is the software?	[18]
P-IV.3	How temporally demanding is the software?	[18]
P-IV.4	How insecure, discouraged, irritated and stressed are you?	[18]
P-IV.5	How makes this software you a headache on occasion?	[16]
P-IV.6	To what extend is the use of this software effortless?	[20]
P-IV.7	To what extend is the use of this software frustrating?	[16]
P-IV.8	When did you feel tense because of using this software?	[16]
P-IV.9	When tends the software to be quiet?	[15]