



Unit 5

Conzeptualizing interaction

HMI Design Masterclass handout

Structure is all well and good, but efficient and accurate interaction between users and machine is what turns an ordinary HMI into an outstanding one. This unit presents the principal options for designing interaction as well as strategies for message handling and preventing faulty entries by users – both are typical HMI design issues. Plus, we show you how to give users context-sensitive support without the usual lengthy manuals.

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Conceptualizing interaction

Design Tips

1	Opt for a menu or a workflow based on the context	Depending on the specific task, a well-sorted “functions shelf” (menu) or a “functions process” (workflow) will work better for your users.
2	Design error messages that support the user in resolving the issue	Good and bad error-handling routines affect the performance of the machine – and the image of its manufacturer.
3	Prevent user mistakes wherever you can	The design and labeling of input boxes will help users work with your HMI without making mistakes.
4	Protect users from small clicks with huge consequences	To prevent costly mistakes, be sure to ask for confirmation by including “Do you really want to...” pop-ups or an “Undo” button.
5	Forget manuals; help users right away instead	Small “Info” icons with contextual help in the right place can save users a lot of time.
6	Use animated content for added value, not for its own sake	Animated content should always provide additional, relevant information and be functional and support users in their work.

Here are the tips from the unit for your convenience.

Keywords

Dialogue	In this context, the dialogue between user and machine – so the user’s inputs and the system’s outputs in the HMI.
Workflow	A defined sequence of operations to guide the user through a use case (e.g., a setup wizard).
Menu	In contrast to a workflow: A structured list of various functions that the user can freely choose from.

These terms are worth noting.

Short Exercise

Select three error messages – e.g., from your HMI projects or other applications – and analyze their quality. Is the user concisely informed about the type, the location, and the background of the error? Is the user given the opportunity to react directly to the error – in the sense of prioritizing actions or solving the problem? If necessary, optimize these error messages.

Try putting your new skills into practice with this exercise.