

Users played active role in development of VLT® AutomationDrive

Traditionally, product development involved users in the final stages to test their reaction. In the trace of the “human factor”-focus in US a decade ago, the concept “User Centred Design” was adapted in both US and Europe. In Danfoss, Jacob Buur introduced the concept eight years ago and Danfoss successively introduced the concept in product development. The concept means that users are not only testing, but also contributing to the process from the very beginning.

The first step is to recognise the environment the product is going to be used in and what kind of time, space and tools are used. For this purpose, design engineers spend a number of days “in the shoes” of the user – performing their tasks, using their tools, learning their terms, noting their conditions. The specially trained “user-centered design team” documented and analysed the most important daily routines mounting, commissioning, operating and servicing from video recordings and came up with a number of very innovative, creative but perhaps not very realistic operation and design strategies.

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Successively the number of different potential products is narrowed down, but still the recognitions of users needs, requirements, habits and tasks remained as the basis of further development.

3-6 years of user involvement

Users in different trades, professions, cultures and different parts of the world were involved when Danfoss Drives developed the VLT® AutomationDrive. A number of users representing groups as operators, designers and service staff from countries like Germany, United Kingdom and China were involved.

“Most importantly:”, says Nina Wetcke, Danfoss Drives, Graasten, “We kept the same group during the whole 4-5 years sequence. That way we overcame the natural shyness and embarrassment of using video cameras and other equipment, and eventually our user-partners in the development process gained pride in their involvement. They experienced how their wishes and ideas were adapted. This again influenced and improved their conception of Danfoss and the drives – a conception they tend to pass on to colleagues.

“Overall the method leads to better management of the development process”, says Nina Wetcke. “Throughout we maintain the connection to the users preventing “wild shots” that need expensive and time consuming “rework” in later phases”.

Specific improvements

Involvement of users has several specific implementations in the new VLT® AutomationDrive. One is the physical layout of the control panel where habits from the use of mobile phones have been adopted. Another is the graphic display having fewer codes and more clear text – more graphs moving and fewer rows of numbers.



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