

## An empirical validation of quantified usability attributes

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AN EMPIRICAL VALIDATION OF QUANTIFIED USABILITY ATTRIBUTES

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One of the main problems of standards (e.g., DIN, ISO) in the context of software ergonomics is, that they can not be measured in a quantitative way [5]. The scope of this paper encloses the product "interactive software." Different types of user interfaces can be described and differentiated by the powerful concept of "interaction points" [3]. Regarding to the interactive semantic of "interaction points" (IPs), four different types of IPs must be discriminated. On the basis of the concept of interaction points, the dimensions "feedback", "interactive directness" and "flexibility" can be quantified. Eight different measures are introduced: two feedback measures, two measures for interactive directness, and four flexibility measure [4].

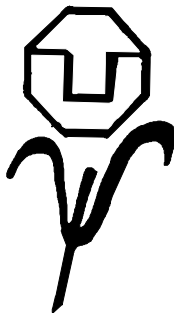
The results of a theoretical and empirical validation of all eight quantitative measures are presented and discussed. Three different interactive software products with two different interfaces each were investigated. The outcomes of four experiments [1] [2] are related to the quantified interfaces. We can show that dialogue flexibility must exceed a threshold to be effective. The extent of users' experience (system knowledge) is correlated with dialogue flexibility; especially experts profit by increased flexibility.

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