



HEINZ NIXDORF INSTITUTE

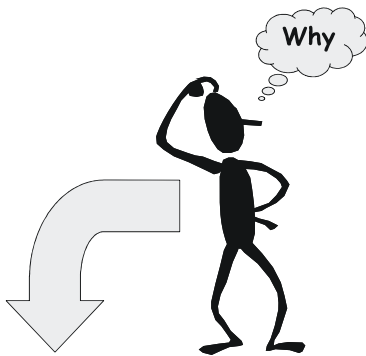
Computer Integrated Manufacturing
Prof. Dr.-Ing. Jürgen Gausemeier

Integrating design method for electrical elements in mechatronic design

Mechatronic [...] can improve existing products and leads to new solutions. [VDI2206]

Integrated design prevents cost- and time consuming iterations. [VDI2206]

Research question:
Which information is needed for different (electrical) design steps?



Research goal:
Improved method
considering possibilities and requirements of electronics in design

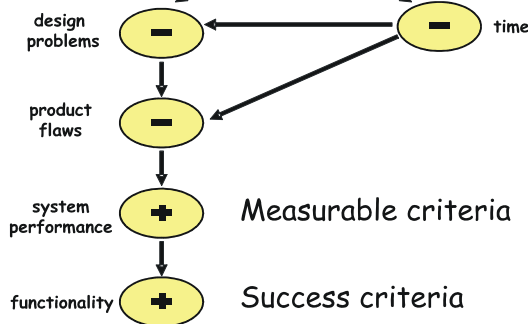


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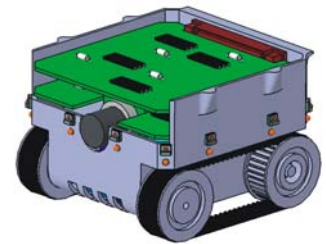
Transfer to existing design methods

Impact model:

An integrating design method is assumed to reduce design problems and needed time. These improvements lead to mature products with less design flaws, increasing the system performance. The result consists of a new or significant better functionality.



Case study: Mini robot



Research evolution:

The research consists of four steps. Based on theoretical knowledge of design methods and systems engineering, the electrical design approach (with a focus on modeling and validation) is analysed. The insights will be transferred to existing mechatronic ontologies and structures. An improved method for mechatronic design is the expected result of my PhD work.

