

Stellingen behorend bij het proefschrift

# **The Building Block Method**

**Component-Based  
Architectural Design  
for  
Large Software-Intensive  
Product Families**

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1. The system-theoretic view of software engineering is more powerful than the development-oriented view often used in practical SW engineering (chapter 2).
2. Object design, aspect design and concurrency design are three essential dimensions in the design of embedded systems (chapters 3, 4, 5, 6).
3. Qualities and aspects are both orthogonal multi-view descriptions of a technical system. Qualities are for describing a system from an external perspective orthogonal to its (functional) features while aspects are for describing the functionality of a system orthogonal to its constituting components (chapter 5).
4. The promise of reusing software components does not come true without an overall aspect design. Aspects are the backbone of a component-based software architecture (chapter 5).
5. Component frameworks, platforms and product family architectures are foremost the result of consolidation and not of innovation (chapters 7, 8, 11).
6. Scaling up a solution is much more difficult than scaling down a solution. Nevertheless, in both cases a check for the relevance of the solution to the problem has to be performed.
7. Due to a lack of understanding of both their customers and developments in essential technologies, companies are often unable to predict even the near-term progression in product features.
8. Creative methods do not exist. Good methods are consolidations of good as well as bad experiences.
9. Organisations without a technical hierarchy produce democratic system designs.
10. Discussions are an important cultural phenomenon in German and in Dutch organisations. However, their function is quite different. In Dutch culture they serve to achieve harmony within a group, while in German culture their function is to remove uncertainty.
11. The application of *divide and conquer* leads to *divide and lose*.