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An activity-based defect management framework for product development

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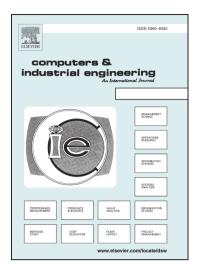
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Abstract: As competition intensifies, development of complicated hardware products and

the decrease in development cycle lead to increasing design defect risk in hardware products,

resulting in all kinds of problems such as unsafe product, product development failure and so

on. Therefore, it is important to manage design defect during all stages of product development to

improve product design quality and product development success rate. Factors influencing

design defects injection vary according to the different attributes of a product development,

including the product complexity, the experience of the developers, the development cycle

and tool. The most significant challenge in design defect management is to identify design

activities that are likely to cause defects. This paper proposes a design defect management

framework based on design activities that assess and identify design defects. First, the product

development process is decomposed by using a work breakdown structure (WBS) to obtain

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