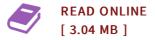# Automatic Programming Applied to VLSI CAD Software: A Case Study

By Rob A. Rutenbar

Springer. Paperback. Book Condition: New. Paperback. 234 pages. Dimensions: 9.2in. x 6.1in. x 0.6in.This book, and the research it describes, resulted from a simple observation we made sometime in 1986. Put simply, we noticed that many VLSI design tools looked alike. That is, at least at the overall software architecture level, the algorithms and data structures required to solve problem X looked much like those required to solve problem X. Unfortunately, this resemblance is often of little help in actually writing the software for problem X given the software for problem X. In the VLSI CAD world, technology changes rapidly enough that design software must continually strive to keep up. And of course, VLSI design software, and engineering design software in general, is often exquisitely sensitive to some aspects of the domain (technology) in which it operates. Modest changes in functionality have an unfortunate tendency to require substantial (and time-consuming) internal software modifications. Now, observing that large engineering software systems are technology dependent is not particularly clever. However, we believe that our approach to xiv Preface dealing with this problem took an interesting new direction. We chose to investigate the extent to which automatic programming ideas cold be used to...

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