

/SOFTWARE DEVELOPMENT RESOURCE ESTIMATION
IN THE 4TH GENERATION ENVIRONMENT/

by

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A MASTER'S REPORT

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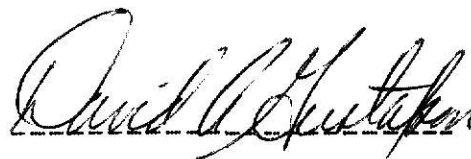
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CHAPTER 1 RESOURCE PLANNING IN SOFTWARE DEVELOPMENT

1.1 OVERVIEW.

"You cannot control what you cannot measure." [Dem 83]

With this succinct statement Tom DeMarco provides a strong justification for the study of project size estimation in the software development process. In the course of this report the author intends to provide a historical overview of the most widely used measure developed to fulfill this requirement, the Putnam Model, to provide the foundations upon which this measure is based, to detail a methodology for automating this software development tool, and to analyze the impact of 4th generation technological advances upon this tool.

1.2 BACKGROUND AND PURPOSE.

Software development management has historically been a fruitful area of study for the software engineer for a variety of reasons. Perhaps the most cogent rationale for the emphasis placed on the study of the software development management process and upon the science of software engineering is the fact that this area, perhaps more so than any other area of computer science, is the principal interface with the ultimate beneficiary of the discipline - the customer or end-user of the product. While customers are rapidly becoming more sophisticated and knowledgeable in this generation of computerization, the fact remains that in the final analysis the customer's principal interest is in the deliverable product and not in how or why the