various ambient temperatures, and the cost of fans. The mechanical engineer will then use a custom program he has written to compute the dimensions and placement of air openings to allow proper ventilation.

He will also create mechanical drawings of the instrument case, circuit boards, and internal support structures from the project database. Using a finite element mechanical modeling package on the mainframe, he will analyze the rigidity of the mechanical design under vibrational stress. The mechanical drawings will yield production and assembly drawings for the model shop and ultimately for production. These can be easily updated at the workstation and are available through the network.

All this time our electronics engineer is getting a head start on documentation back at his own workstation, and he’s also updating the project status so that he can issue timely status reports to management.

All data created in the design process is available for reference by manufacturing engineers. The whole process of getting the product to manufacturing is much shorter because at each stage of the development cycle the engineer was able to function more productively. He had general-purpose tools to help him with all the nondereign tasks that take up a large portion of his time, and he had the specific tools to make his design time count.

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Before entering the marketing field, Reed was manufacturing manager for IDD for three years. He started work at Tektronix as an engineer in 1966. He graduated from Bradley University, Peoria, Illinois, with a BA in physics and received his MBA from Portland State University, Oregon.

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