FOREWORD

In this issue we present articles from around the world that highlight some of the crucial contemporary issues and concerns within the community of computer professionals. These articles highlight not only the diversity of our journal but the complexity of the impact of this technology on the way we work, the way we do business, and the way we live.

Alice E. Smith and Cihan H. Dagli provide an analysis of the use of neural network techniques in manufacturing process control. These techniques promise a technology which itself is more attuned to the complexities of the actual work environment and which can learn to adapt to that environment. In the past computers were limited to the algorithmic interactions with the world that their programmers anticipated. With such techniques as those explored by Smith and Dagli the relationship between the machine and its environment becomes much more complex. The complexity, however, is not only internal to the software’s interactions with the world of its inputs. The existence of the computer within the business and social environment has helped transform that environment.

The other articles from this issue explore the social dimensions of computers. Trevor T. Moores of Hong Kong writes about a particular difficulty in managing a computer project: making an accurate projection of its costs. Software is, in a sense, a product and a resource unlike any that has ever existed and many businesses face a critical problem of estimating costs with every major software project. The Software Cost Estimating Techniques that they study can provide management with a tool to gain some control over the place of software within the firms.

Kamchorn Lehmongkol and Srisakdi Charmonman, both of Thailand, take an historical approach towards understanding the developing role of computers within the modern organization. The proposals, which the authors trace back twenty years, are complex but their common emphasis is allowing the organization as a whole to gain control of its computer systems and integrate them into the organization. Those of us who are immersed in this fascinating technology may often view the organization as a means for supporting the computer system; this article emphasizes the importance of fitting the system into the organization’s way of functioning.
As Eelko K.R.E. Huizingh of the Netherlands also emphasizes that it is important that Information Systems departments integrate themselves with the organization. Studying the impact of the rise of personal computers, the studies found that the resistance to end-user computing by IS departments played a critical role in the loss of status of such departments within many organizations; once it was discovered that computers seemed to be simple to operate, workers felt they had no use for the monopolistic control that IS departments were trying to maintain. With this, both the control and the position of IS departments within the organization began to decline.

The relationship between computers and the external environment is very complex, but the authors contributing to this issue provide significant insight that can make that relationship manageable.

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