

Preface

This special double issue is an opportunity for the *IBM Systems Journal* to celebrate the long and fruitful collaboration between the Media Laboratory at the Massachusetts Institute of Technology (MIT) and IBM. The Media Lab is a highly innovative and leading force in the creation of new uses of computers that stretch the very meaning of computing in imaginative and unexpected ways. IBM has been a major participant in and sponsor of the Lab since its inception.

This issue contains an introduction on the creation and development of the Lab, followed by five sections of papers and essays, each led by an overview reflecting on that section's area of technical innovation. There are 31 contributions in all. We are indebted to D. A. Boor of the IBM Internet Division, who represents IBM at the Media Lab in Cambridge, Massachusetts, for his noteworthy efforts in encouraging the Lab and the authors to participate, thus making this double issue possible. We are also indebted to W. Bender of the Media Lab for his considerable contributions to the preparation and production of this double issue in both its paper and electronic versions.

The creation of this issue is an experiment with and exploration of new technologies for the electronic preparation, production, and distribution of the *IBM Systems Journal*. The participation of the Media Lab was fundamental and essential to the conduct of the experiment. We are grateful for the cooperation of the Lab and its members in producing this result. One of the new aspects to emerge from this experiment is the simultaneous preparation of an Internet version of this entire double issue, which can be found through the *Systems Journal*'s home page (<http://www.almaden.ibm.com/journal/>) and the Media Lab's home page (<http://www.media.mit.edu>).

The five sectional overviews provide information about the papers in each section, respectively. So this Preface will focus on the issue introduction and the five overviews.

The introduction, by Negroponte, tells the story of the early years of the Media Lab and the evolution of its operating stratagems. The discussion is both illumi-

nating in presenting the history and uniqueness of the Lab and interesting for what it reveals about how such a special place can exist and function.

Lippman provides an overview of the work at the Media Lab that is captured under the title of post-modern video. He discusses the breadth of digital video and its impact on communications systems and networks.

One aspect of the growing capabilities of computerized networks is the way they allow individuals and communities of individuals to share information and to personalize it. Bender presents an overview of the critical issues of information access and relevancy.

Computer-based media open vast new areas for exploration, because they allow new ways of thinking and creating, which can in turn affect the media themselves and give new insights into related areas of science and culture. Resnick offers an overview on using computers to create Things That Think and how that can lead us to think differently about the world.

Bender and MacNeil discuss the Visible Language Workshop and the work it has spawned in changing the perception of what publications are and how they could be designed and presented. The Workshop has created a new understanding of electronic information and a new sense of the balance between quantitative description and qualitative expression.

One aspect of information technology that has become confused is the relationship of the information to the medium used to communicate it, as Gershensfeld notes in his overview. Although each can be considered separately, many interesting results are obtained by looking at the boundary between them.

The next issue of the Journal will be a special issue on techniques for the development of software applications using object technologies, client/server methods, and computerized software processes.

Gene F. Hoffnagle
Editor