FEATURE ARTICLES

9 A Framework for Logical-Level Changes Within Database Systems  
Gary H. Sockut  
Logical-level changes within database systems have generic characteristics that can be identified and grouped to form a powerful conceptual framework.

29 Japanese Text Input System  
Masasuke Morita  
Written Japanese presents a number of difficulties for keyboard operators. This system combines a new keyboard and a software program to make input easier and faster.

38 Design and Implementation of the VAX 8600 Pipeline  
John DeRosa, Richard Glackemeyer, and Thomas Knight  
VAX 8600 pipelining allows the processing of as many as four macroinstructions at once. In addition, the machine cycle time is cut by more than half.

51 Observations on Operating a Local Area Network  
Marshall D. Abrams  
Local networks, part of the evolving data communications environment, provide shared use of resources through a hierarchy of value-added services.

67 An Overview of Information Retrieval Subjects  
Martin Bärtschi  
Fuzzy set models, vector space models, and probabilistic models have all been proposed to solve information retrieval problems. Despite such efforts, many of those problems remain unsolved.

86 Software Cost and Productivity Improvements: An Analogical View  
Barry G. Silverman  
By making small adjustments in information flows and job designs, software managers can reuse existing software more effectively.

WORKSHOP

John Tartar, Bruce Arden, Taylor Booth, Peter Denning, Ray Miller, and Andries van Dam  
This workshop report points out that no core description of computer science is universally accepted. A model of the discipline must emphasize global issues over isolated objectives, cooperation over competition.

105 Ruminations on Education  
Peter J. Denning  
Remarks based on the author’s opening address at the Snowbird 84 meeting and on the ensuing discussion.