11 Hints for Computer System Design
Butler W. Lampson
Decorated with pithy quotations from many sources, this collection of good advice and anecdotes draws upon the folk wisdom of experienced designers.

31 Transforming an Ada Program Unit to Silicon and Verifying Its Behavior in an Ada Environment: A First Experiment
Although the functional behavior of this IC was tested in-system, the evaluation of circuit performance should not be long in coming.

50 Message/Object Programming: An Evolutionary Change in Programming Technology
Brad J. Cox
Could a marriage of the message/object model, a la Smalltalk-80, and the operator/operand model, a la Unix, improve the lot of both users and programmers? Stay tuned . . .

63 Knowledge and Database Management
Gio Wiederhold
Artificial intelligence techniques are effective in dealing with the complexity of large databases. Their use can move well-understood human decision-making processes into the computer system.

75 Verifying and Validating Software Requirements and Design Specifications
Barry W. Boehm
These recommendations provide a good starting point for identifying and resolving software problems early in the life cycle—when they're still relatively easy to handle.

DEPARTMENTS

4 From the Editor-in-Chief
5 Introducing the Editorial Board
7 Guidelines for Authors
95 Software Standards: The Need for Standards
98 Software Reviews: Pascal or C?
100 New Products
105 Product Highlights
111 Soft News: Supercomputer Language Problems; Microprogramming Repository; Softcon
115 Professional Calendar
116 Call for Papers
116 Short Courses
117 Book Reviews: Unix Primer Plus; Smalltalk-80; Software Engineering with Ada
120 Advertiser/Product Index