4 The Gradual Expansion of Artificial Intelligence
   Elaine Rich
   Computer problem-solving tasks can be partially transferred to computers as artificial intelligence is improved. The effect? A gradual shift from human-controlled to machine-controlled systems.

15 A Total System Design Framework
   Gruia-Catalin Roman, Mishell J. Stucki, William E. Ball, and Will D. Gillett
   System inadequacies may be the fault of designers who didn't look at the whole picture. To be successful, a design must merge hardware and software concerns into a single, unified perspective.

30 Hyperchannel Local Network Interconnection Through Satellite Links
   William R. Franta and John R. Heath
   While interest in connecting distributed local network rises, the cost of satellite communications systems declines, making satellite links an affordable means of interconnecting distributed local networks.

40 Digital Type Manufacture: An Interactive Approach
   Jim Flowers
   The Renaissance introduced print design; the 20th century automated it with a letter input processor that combines the designer's art with the computer's speed and precision.

50 Residue Arithmetic: A Tutorial with Examples
   Fred J. Taylor
   A 1700-year-old Chinese arithmetic has been revived. The residue number system has no overhead and can support very high speed computation.

64 An Adaptable Methodology for Database Design
   Nicholas Roussopoulos and Raymond T. Yeh
   In this truly adaptable approach, designers begin by defining the application environment and then work inward until they reach a level that can be handled by available DBMSs.

81 The Open Channel
   Does the Law Recognize Software Engineers? Arthur S. Jensen

84 New Products
97 New Literature
98 New Applications
100 IC Announcements
101 Microsystem Announcements
102 Update: AT&T enters computer business; Death of IEEE President-elect; Society election schedule
110 Calendar
111 Call for Papers
118 Tables of Contents: Computer Society Magazines
120 Classified Ads
125 Book Reviews: Fundamentals of Programming Languages; Basic for the Apple II
127 The Bookshelf
128 Advertiser/Product Index

Reader Service Cards, p. 128A.
Publications Order Form, p. 126.
Computer Society Membership Application, p. 83.
Change-of-Address Form, p. 106.