computers
the next 5 years

1970
1975
1960

February 24 · 25 · 26 spring compcon76
TWELFTH IEEE COMPUTER SOCIETY INTERNATIONAL CONFERENCE
JACK TAR HOTEL, SAN FRANCISCO, CALIFORNIA
"At this conference we expect to hear about those products, services, and ideas which are on the drawing boards today, and which can be expected in the field within the next five years. Because of recent advances in circuit technology, the progress of the industry over the next five years may be more explosive than what we have experienced in the past."

Dr. Sidney Fernbach, General Chairman, Computation Dept., Lawrence Livermore Laboratory

Dr. Herschel H. Loomis, Jr., Program Chairman, University of California, Davis

KEYNOTE SPEAKER Tuesday

Dr. Edward E. David, Jr., Executive Vice-President, Gould, Inc. and former Science Advisor to the President

HISTORICAL REVIEW Tuesday

Dr. J. Presper Eckert, Vice President and Scientific Advisor, Sperry Univac

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tutorial

Monday, February 23: 9:00 AM
Jack Tar Hotel, San Francisco

“UNIQUE ASPECTS OF MICROCOMPUTER APPLICATIONS”

Course Outline

1. Introduction to Microprocessors
   (a) definition
   (b) implications on applications

2. Microprocessor Architecture and Technology
   (a) architectures
   (b) technologies

3. Development Considerations
   (a) hardware support
   (b) software support

4. Applications Example
   (a) detailed description and analysis
   of one complete microprocessor based system

INSTRUCTOR

Fred F. Coury,
President,
Fred Coury Associates

Fred Coury was Minicomputer Engineering Section Manager, Hewlett-Packard Company, Associate Research Engineer and Lecturer, University of Michigan. Mr. Coury is currently an independent consultant in digital designs, specializing in the hardware aspects of microprocessor-based systems, design and applications. Mr. Coury received his B.S. and M.S. from the University of Michigan in 1963 and 1967.

CHAIRMAN: Tutorial Session

Robert H. Wyman, Jr.
Lawrence Livermore Laboratory
Tuesday, February 24, 1976

KEYNOTE SESSION

Morning:
Conference Keynote Address by Dr. Edward E. David, Jr., Executive Vice President, Gould Inc.
Review of the History of Computing by Dr. J. Presper Eckert, Vice President and Scientific Advisor, Sperry Univac.

Afternoon:
Conference Kick-off Talks:
HARDWARE: Dr. Michael Flynn, Stanford University.
SOFTWARE: Dr. Robert McClure, Palyn Associates, Palo Alto, CA.
FIRMWARE: Mr. Michael J. Galey, International Business Machines, San Jose, CA.
TECHNOLOGY: Dr. Jack S. Kilby, Consultant.
APPLICATIONS: Dr. Andy Knowles, Digital Equipment Corporation, Marlboro, Massachusetts.

Evening: COMPCON Cocktail Party
Following the Cocktail Party:
Conference Panel Discussion led by Dr. Willis Ware, Rand Corporation.

Wednesday, February 25, 1976

Morning:
1. Short Notes.
Chairman: Dr. Martin Graham, University of California, Berkeley, CA.

2. What's Going on in the rest of the World?
Chairman: Dr. Waldo Magnuson, Jr., Lawrence Livermore Laboratory, Livermore, CA.

3. “What Will Microprocessor Hardware Evolve Into?”
Chairman: Dr. Jack Grimes, Tektronix, Inc., Beaverton, Oregon
“Technology for Microprocessor Hardware,” Peter Verhofstadt, Fairchild Semiconductor, Mountain View, CA.

Chairman: Professor David J. Farber, University of California, Irvine, CA.
“The Philosophy of a Distributed Banking System,” Philip Ware.
“Compilation in a Distributed Function System,” J. L. Baer, University of Washington.
Panel Discussion:
Panelists: Philip Ware, Servaro Ornstein, T. C. Chen.

5. “Short Notes” (Continuation of Session 1)
Chairman: Dr. Martin Graham, University of California, Berkeley, CA.

6. “What Can We Expect in Microprocessor Software?”
Chairman: Mr. Terry Opdendyk, Intel Corporation, Santa Clara, CA.
Panel Session: “How is Microprocessor Software Different from Mini Computer Software?”

7. “What is Happening in Mass Storage?”
Chairman: Mr. Eric Salbu, Ampex Corporation, Sunnyvale, CA.
“Practical Applications of MSS,” R. H. Howie.

8. “What Can We Expect in Data Communication Techniques?”
Chairman: Professor Leonard Kleinrock, University of California, Los Angeles, CA.
“Techniques for Handling Stream Traffic Via Packet Switching,” Robert E. Kahn,
Advanced Research Projects Agency, Washington, D. C.
“Communication Network Interfaces,” Lawrence G. Roberts, Telenet
Communications Corporation, Washington, D. C.

● Afternoon:
9. “Where are Data Base Systems Heading?”
Chairman: Professor David Hsiao, Ohio State University, Columbus, Ohio.
“Imbedding Data Management Operation in Programming Languages,” Anthony I. Wasserman, University of California, San Francisco, CA.

10. “What Will Win the Solid State Memory Race?”
Chairman: Mr. Robert Lloyd, National Semiconductor, Santa Clara, CA.
“CCD vs RAM’s for Bulk Memories,” Dave House, Intel Corp.
“P vs NMOS as a Main Memory Technology,” Richard Horton, Texas Instruments.

Chairman: Mr. David Jasper, Control Data Corporation, Minneapolis, Minn.

12. “What is the Future of Language-Directed Machines?”
Chairman: Dr. Jack Grimes, Tektronix, Inc., Beaverton, Oregon.

13. “Can Data Base Machines be Built?”
Chairman: Dr. Vincent Y. Lum, Computer Science Department, International Business Machines, San Jose, CA.
“The Role of Storage Hierarchy in Data Base Management,” Stuart E. Madnick, MIT.
“Recent Developments in Data Base Management,” Bruce Bera, Syracuse University.

Thursday, February 26, 1976

● Morning:
14. “Does the Super Computer Have a Future?”
Chairman: Mr. W. J. Watson, General Automation, Anaheim, CA.
“Will Supers and Minis Squeeze Out the Main Frames,” Charles Casale.

15. “Will the Computer Replace Money?”
Chairman: Mr. B. Ray Traweek, Senior Vice President, National BankAmericard, Inc., San Mateo, CA.
“EFTS and Economics: Marriage or Divorce?”, John B. Benton, TRW Inc., Los Angeles, CA.
“An Opportunity for Success,” Charles Jones, Federal Home Loan Bank of Atlanta, Atlanta, GA.

16. "What Can We Expect in Hardware Design Techniques?"
Chairman: Dr. Tom Whitney, Hewlett-Packard, Cupertino, CA.
"PLA's: When and Where to Use Them," John M. Birken, Monolithic Memories, Inc.

17. "Where is the Money Coming From?"
Chairman: Mr. Richard Hanschen, New Business Resources, Dallas, TX.
"Intermediate Level Equity Financing," Philip Greer.

18. "How will the Computer Advance Automation?"
Chairmen: Dr. David Nitzan, Dr. Charles Rosen, Stanford Research Institute, Menlo Park, CA.

20. "How are Computers Being Used in Crime?"
Chairman: Mr. Daniel Goldenberg, MITRE Corp., Box 208, Bedford, Mass.
"Computer and Data Abuse," Donn Parker, Stanford Research Institute, Menlo Park, CA.
"Embezzler's Guide to the Computer," Brandt Allen, Colgate-Darden Graduate School of Business Administration, University of Virginia, Charlottesville, VA.

Chairman: Mr. Christopher Shaw, Xerox Corporation, Los Angeles, CA.
"On Software Certification," Ralph Keirstead, Stanford Research Institute, Menlo Park, CA.

22. "The Personal Computer: Dream or Reality?"
Chairman: Mr. Robert Albrecht, Editor, Peoples Computer Company, Menlo Park, CA.

23. "Computer Science — Is it Related to Computing?"
Chairman: Professor H. H. Loomis, Jr., University of California, Davis, CA.
"IEEE Regional HELP Activities," David Rine, West Virginia University, Morgantown, West Virginia.
"A Bachelor of Arts in Computer Programming," W. McKeeman, University of California, Santa Cruz, CA.
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