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Commemorative Booklet for the Thirty-Fifth Asilomar Microcomputer Workshop
April 15-17, 2009

Programs from the 1975-2009 Workshops

This file available at www.amw.org
AMW: 30th Workshop Prologue – Ted Laliotis

The Asilomar Microcomputer Workshop (AMW) has played a very important role during its 30 years of existence. Perhaps, that is why it continues to be well attended.

The workshop was founded in 1975 as an IEEE technical workshop sponsored by the Western Area Committee of the IEEE Computer Society.

The intentional lack of written proceedings and the exclusion of general press representatives was perhaps the most distinctive characteristic of AMW that made it so special and successful. This encouraged the scientists and engineers who were at the cutting edge of the technology, the movers and shakers that shaped Silicon Valley, the designers of the next generation microprocessors, to discuss and debate freely the various issues facing microprocessors. In fact, many features, or lack of, were born during the discussions and debates at AMW. We often referred to AMW and its attendees as the bowels of Silicon Valley, even though attendees came from all over the country, and the world.

Another characteristic that made AMW special was the “required” participation and contribution by all attendees. Every applicant to attend AMW had to convince the committee that he had something to contribute by speaking during one of the sessions or during the open mike session. In the event that someone slipped through and was there only to listen, that person was not invited back the following year.

The decades of the 70’s and 80’s were probably the defining decades for the amazing explosion of microcomputers. We feel fortunate to have been at the eye of the vortex that shaped the development of microprocessors and, by and large, fueled the Personal Computing revolution that became the driving engine of the mass market that propelled a brand new industry. An industry that enabled so many non-technical people to increase their productivity many-fold by being able to perform tasks available only to people with access to very powerful and expensive computers prior to that time. The 70’s and 80’s were a major step function in technology development and progress because of the development of the microprocessor. The 90’s and, so far, the 00’s have mostly provided us with incremental progress which can not even come close to the tsunami generated by the microprocessor during the 70’s and 80’s. We will probably have to wait at least another decade before we will see a technological phenomenon that will produce a revolution such as that of the microprocessor.

Recent AMW workshops, even though always fully subscribed, if not oversubscribed, have been, in my judgment, somewhat less technologically challenging and more socially oriented. Perhaps, that is because the breadth of technology and applications is so vast that it is difficult to identify and zero in to a single hot technology spot. AMW has always been a general, broad-topic conference. Perhaps, it is time to adopt thematic concentrations in future AMWs. On the other hand, who knows? Perhaps the general conference formula is the reason it has survived and still thrives 30 years later.

Ted Laliotis, AMW founder and first chairperson

www.laliotis.org

PS. I always enjoyed the titles of honorary committee member and/or Chairman Emeritus of AMW that I have occasionally been given. I think that similar titles should be bestowed to all veteran AMW committee members in recognition of their services along with invitations to participate at the various organizing meetings and events. Inclusion, not exclusion, is what promotes success.
It all started with a phone call from an IEEE member in Los Angeles. He said that microcomputers were starting to catch on, and that the IEEE should have a workshop on them. He asked me if I would set one up. Being new to the Consulting business, and not knowing the first thing about setting up a conference, but not yet learning to say no, I said "sure, why not." After he hung up, I called my friend Fred Clegg at Santa Clara University, hoping that he would know something about setting up conferences, and also have a place to hold one.

We were saved by a call from Ted Laliotis, who, along with Don Senzig, had independently decided to start an IEEE conference on micros and thought we should pool resources and do just one.

The first Asilomar Committee meeting was held upstairs at the Menu Tree. Another Fred (Terman) was there because he lived in Monterey, and knew how to set up Conferences at Asilomar. He subsequently took responsibility for making arrangements for the conference, and, after thirty years, certainly deserves our appreciation. We literally could not have done it without him.

We blocked out time for five sessions, and came up with topics for four of them: Hardware, Software, Technology, and Applications. After wracking our brains for a topic for the fifth (Thursday evening) session, I suggested that we leave it open for people sign up to talk about whatever the wanted to at the conference itself. I volunteered to chair the session, and did so for the next twenty years (talk about working smarter, not harder!).

The talks were scheduled for ten minutes each, in the order in which they were signed up for. The session was an instant success, leading some to later refer to it as a "Rich Asilomar Tradition." Leave it to Jim Warren to shorten it to "The RAT Session."

The rest, as they say, is history.

Just to put some things in perspective:

- The 8080 (2 microsecond cycles (500 KHz), 64 kilobyte address space) was the latest microprocessor.
- Four kilobyte, 100 nanosecond dynamic RAMs, were the latest in solid state memory.
- The ASR33 Teletype (10 characters per second, paper tape reader and punch) was the most widely used terminal.
- There were no personal computers, just the Altair schematics, available free from Popular Electronics, and the newly available "Apple" kits.
- There was no Internet, just the ARPAnet. Telephone communication was over an IBM 300 baud modem.
Most microcomputer people were originally electrical engineers, physicists, or mathematicians who got their hands on an 8080 manual, got hooked, and took it from there. A significant percentage of the world's microcomputer "experts" could be found at the Home Brew Computer Club meetings.

Although the Conference severed its relationship with IEEE long ago, and has morphed into the "Asilomar Workshop on Neat Stuff", it has never wavered from its original principles: An invitational meeting of the "movers and shakers" of the industry on the cutting edge of technology. Tightly scheduled, highly interactive formal and informal meetings, no marketing pitches, no non-participating observers, no formal publications, no going to bed until at least one A.M....
CALL FOR PARTICIPATION
IN
ADVANCED ARCHITECTURE
AND
APPLICATIONS OF MICROCOMPUTERS
A Workshop
April 30 - May 2, 1975
Asilomar, California

Sponsored by the Technical Committee on Computer Architecture and the Western Area Committee

Large-scale integration has made the computer-on-a-chip a practical system component. As a result microprocessor architecture, hardware, and software is currently the most dynamic area in the computer field. The objectives of this workshop is to bring together the users and the manufacturers of microprocessors in an attempt to understand the unique characteristics of microprocessors and explore ways of enhancing the range of microprocessor applications. The focus will be on the unique aspects of microcomputers as system components.

The accompanying description of four scheduled sessions lists representative topics. Other topics relevant to the theme of the workshop will be welcomed.

The first session, "Limitations of Current Microprocessors from the System Viewpoint," will establish a reference point for further discussions. The session will attempt to define exactly where we are with respect to the actual capabilities of existing products. It will include descriptions of systems which are limited in one way or another by the fact that they are microcomputer-based, as well as applications which are potential candidates for a microcomputer, but could not be implemented as such using currently available products.

Session two, "Technology Constraints, Present and Future," will consider the limitations imposed by technology. Current limits on speed, complexity and cost will be discussed in terms of limitations on technology-related parameters such as processing, packaging, masking, and testing. Also, predictions will be made as to how these limitations can be expected to change in the future.
Session three, entitled "Software Considerations in Future Designs" will address itself to the software considerations in device specification and design--i.e., the software aspects which are built into rather than onto a microcomputer system.

The fourth session, "Microcomputers in the Future: Unique Applications" is intended to provide directions for further developments. By indicating potential applications which are unique to microcomputers--i.e., things which could not be done without them--and then examining the characteristics of the devices which are implied by the applications, it is hoped to shed some light on the critical parameters of development.

A fifth session will be set aside as an ad hoc session whose topic(s) will be determined by the interest of the participants.

To encourage free discussion, no proceedings will be published and no recordings or photographs will be permitted.

Should you be interested in participating in the workshop, please return the questionnaire immediately. Invitations will be mailed by March 30, 1975 to those selected by the Program Committee. Whether or not you plan to participate, we would appreciate your calling the announcement to the attention of a qualified colleague who may have been omitted from the mailing.

The fee for the Workshop (including room for two nights and meals) will be $70 for IEEE members, $85 for non-members. DO NOT REMIT the fee with your questionnaire-application.

Address your reply to:

Mr. Don Senzig
Workshop Registration Chairman
Hewlett-Packard Laboratories
1501 Page Mill Road
Palo Alto, CA 94304
APPLICATION MUST BE RETURNED IMMEDIATELY

IEEE COMPUTER SOCIETY

ASILOMAR WORKSHOP

ON

ADVANCED ARCHITECTURE AND APPLICATIONS OF MICROCOMPUTERS

APRIL 30 - MAY 2, 1975

QUESTIONNAIRE

NAME_________________________________________ TITLE_____________________________________

COMPANY NAME______________________________________________________________

ADDRESS________________________________________________________ TELEPHONE___________

Present activities related to the subject of the workshop:

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

My primary interest is:

I am interested in participating with my views on the following:

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

I am interested in presenting the following new concepts or evaluations:

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

Attached is an abstract of the talk that I wish to present

Return to:
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INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.
Session I. Limitations of current microprocessors from the system viewpoint.
Chairman: Ken Rothmuller, Hewlett-Packard

Session II. Technology constraints, present and future.
Chairman: Peter Verhofstadt, Fairchild Semiconductor

Session III. Software considerations in future designs.
Chairman: Terry Opdendyk, Intel

Session IV. Microcomputers in the future: unique applications.
Chairman: Bob Winder, RCA
ASILOMAR WORKSHOP  
ON  
ADVANCED ARCHITECTURE  
AND  
APPLICATIONS OF MICROCOMPUTERS  

April 30 - May 2, 1975  

PROGRAM COMMITTEE  

General Chairman  
Ted Leliotis, Fairchild Systems Technology  

Program Chairman  
Fred Coury, Coury Associates  

Program Co-Chairman  
Fred Clegg, University of Santa Clara  

Registration Chairman  
Don Senzig, Hewlett-Packard  

Local Arrangements  
Fred Terman, Stanford University  

Session I  
Wed. p.m.  
Strengths and limitations of current microprocessors from the system viewpoint  
Chairman: Ken Rothmuller, Hewlett-Packard  
1. Framework for discussion, Ken Rothmuller, Hewlett-Packard  
2. Smart instrumentation, Bill Smith, Fairchild Systems Technology  
3. Dedicated digital controllers, Matt Biever, Pro-Log  
4. Entertainment systems, Steve Mayer, Atari  
5. Peripheral controllers, Jim Toreson, Microcomputer Systems Corp.  

Session II  
Wed. eve.  
Multiple microprocessors  
Chairman: John Wakerly, Stanford University  
1. Microprocessor-based distributed processing systems, Dan Zatyico, Varian Data Machines  
2. Interrupts, operating systems, and multiprocessing, Justin Rattner, Intel  
3. Organization of a configurable machine using microprocessors, Keki Irani, University of Michigan  
4. Characteristics of building blocks for general-purpose multimicroprocessor systems, Barry Borgerson, Sperry Research
Session III
Thurs. a.m.
Technology constraints, present and future
Chairman: Peter Verhofstadt, Fairchild Semiconductor

1. User-oriented approaches to microprocessor testing,
   J. Salvador, R. Regalado, Teradyne
2. Technology limitations of SOS, A. Williman, Rockwell International
3. Processor oriented I2L applications in the over-1000-gates area,
   W. Ray, Texas Instruments
4. Serrated functions for digital systems using high-performance
technologies, K. Rallapalli, Fairchild Semiconductor

Session IV
Thurs. p.m.
Software considerations of microprocessors
Chairman: Terry Opdendyk, Intel

1. A microprocessor programming language, Ian Davidson,
   Ian Davidson, University of Waterloo
2. A user's view of microprocessor software and architectural
   needs, Jack Grimes, Tektronix
3. High order languages and AMI software support,
   Larry Krummel, American Microsystems, Inc.
4. Software reliability and validation for microprocessors,
   Edward Miller, Jr., General Research Corp.

Session V
Thurs. eve.
Open for ad hoc discussions
Chairman: Fred Coury, Fred Coury Associates

Session VI
Fri. a.m.
Microcomputers in the future: unique applications
Chairman: Bob Winder, RCA

1. Microprocessors in entertainment and education,
   Steve Mayer, Atari
2. Microprocessors in entertainment and education,
   Gaymond Schultz, Ramtek
3. Automotive applications of microprocessors,
   Timothy Schlax, General Motors
4. Automotive applications of microprocessors,
   Carrol Howanski, Rockwell Microelectronics Development Division
MAY 14 1975

-2-

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SECOND ANNUAL WORKSHOP ON MICROPROCESSORS
April 28-30 1976
Asilomar, California

IEEE COMPUTER SOCIETY

"UNIQUE ASPECTS OF MICROPROCESSOR BASED SYSTEMS"

Workshop Program

SESSION I - Wednesday 2:00 PM

Topic: DEVELOPMENT SUPPORT
Moderator: Many Lemas, Microcomputer Associates
Speakers: Matt Biewer, Pro Log Corporation
         Shirbey Gangware, Gangware Associates
         Larry Krummel, Ramtek Corporation
         Hap Walker, Intel Corporation

Microcomputer development support encompasses a variety of required equipment, software and services. These requirements will be identified. The main theme will be "The Adequacy of Development Support" and, in particular, "Development Systems". Topics to be addressed include: Development Systems Today; Are Sophisticated Development Systems Really Needed?; What Development Systems Should Be; The Pros and Cons of In-Circuit-Emulation; Are Chip Manufacturers Doing a Good Job?; Can Independent Manufacturers Succeed in The Development Systems Business?

SESSION II - Wednesday 7:30 PM

Topic: PRODUCTION AND FIELD SUPPORT OF MICRO-BASED SYSTEMS
Moderator: Jack Grimes, Tektronix
Speakers: Jack Gilmore
         Gary Gordon, Hewlett Packard
         Sterling Hou, Intel Corporation
         Chuck House, Hewlett Packard

This session will examine in depth the unique problems posed by microprocessor based systems in the production and field support environment. This includes: putting the systems together and testing them in production, plus unique needs in the field, such as special techniques for finding bugs and fixing them.
SESSION III - Thursday 8:30 AM

Topic: UNIQUE ASPECTS OF MICROCOMPUTER SOFTWARE
Moderator: Fred Clegg, Hewlett Packard
Speakers: Dennis Allison
          Matt Biewer, Pro Log Corporation
          Gordon French, Processor Technology

Significant differences exist in the software required for micros versus minis. One unique aspect is that a significant percentage of microcomputer programs are being written by persons with no formal training in software techniques. This session will address all the implications of this problem as well as other unique aspects of microcomputer systems software.

SESSION IV - Thursday 1:30 PM

Topic: NEW SYSTEM DESIGN TECHNIQUES AND ARCHITECTURES
Moderator: A. J. Nichols, Intel Corporation
Speakers: Robert Giuliani, Giuliani Microprocessing Inc.
          Jack Grimes, Tektronix
          Larry Joba, Coherent Radiation
          Allan Pierce, GTE Laboratories, Inc.

This session will examine the unique aspects of microprocessor based systems design. Emphasis will be placed on new system design philosophies and techniques which are emerging as a result of applying microprocessors to real world problems. There will also be suggestions as to improved systems architectures based on experience.

SESSION V - Thursday 7:30 PM

Topic: OPEN SESSION (Ad Hoc)
Moderator: Fred Coury, Coury Associates

SESSION VI - Friday 8:30 AM

Topic: MICROPERIPHERALS
Moderator: James Torenson, Microcomputer Systems
Speakers: Ed Averett, Intel Corporation
          David Callan, ICOM Inc.
          Carl Helmers, Byte Publications
          J. E. Juliussen, Texas Instruments
          Imsong Lee, Digital Equipment Corporation

This session will cover the entire spectrum of I/O for microcomputer systems from programmable I/O chips to mass storage devices including trends and standards for the mass market. Discussion will focus on the unique requirements and characteristics on peripherals optimized for microcomputer systems.
THIRD ANNUAL WORKSHOP ON MICROPROCESSORS
April 20-22, 1977
Asilomar, California
"MICRO PROCESSORS IN PERSPECTIVE"

WORKSHOP PROGRAM

SESSION I Wednesday 2:00 PM Topic: EDUCATION
Moderator: Irene Watson, Independent Consultant
Objective: To discuss the problems and possibilities of 1) educating people about micros, and 2) using micros to aid education. The use of micros is accelerating rapidly and hence so is the need for increased knowledge on the part of the managers, the salesmen, the technicians and maintenance people, the engineers, the programmers, the consumers, the consultants, and the public. This panel will be composed of people with differing perspectives on this issue. Come prepared to discuss your and/or your institution's educational needs and problems in regard to micros.

SESSION II Wednesday 7:30 PM Topic: ARCHITECTURE AND TECHNOLOGY
Moderator: Justin Rattner, Intel Corporation
LSI Package Technology - The LSI package proposal of the JEDEC JC-11.3.1 Task Group on LSI Package Outlines.
Mega-Micro Architecture - Large and very large multiple microprocessor arrays for mathematical problem solving.
Personal Computer Architecture - Requirements for a personal computer, both hardware and software. Academic, industrial and commercial interests will present their own views of tomorrow's personal computer.

SESSION III Thursday 8:30 AM Topic: SOCIETY
Moderator: Dennis Allison, Independent Consultant
Will the microcomputer have the same kind of pervading influence on day-to-day life that other high technology products (e.g. the wheel, transistor, birth control pills, etc.) have had? Are hobby computer fanatics prophets in their own time or simply an aberrant splinter of modern society? Will the computer become a common home appliance as television, cameras, and stereos have? Does cheap computing make computing any better? Is the future of the world best served by making all inhabitants programmers; what are the alternatives? Expect a free-form discussion on these and other important topics.

SESSION IV Thursday 1:30 PM Topic: SOFTWARE & DESIGN TECHNIQUES
Moderator: Van Whitis, Bell Northern Research
What distinguishes microcomputer software and design techniques from the techniques used on mainframes and minis... very little. As micro applications grow in size, the development problems approach the magnitude of those faced by the micro's antecedents. Multiprocessor systems design and large program development aids are topics central to this session.

SESSION V Thursday 7:30 PM Topic: OPEN SESSION
Moderator: Fred Coury

SESSION VI Friday 8:30 AM Topic: APPLICATIONS
Moderator: Dennis Paull, Paull Associates
Where are micros being used now? What new application areas will be opened up during the next five years? Are feasible and viable applications waiting for something really different to be invented? What new uses (if any) will develop out of the current proliferation of semi-novel chip sets from the micro manufacturers? And, if none, why are they doing it? These and other questions will be discussed by the Workshop with help from a panel of experts in automotive, consumer, hobbies, business, communications, control, instrumentation, multi-micro and other fields.
FOURTH ANNUAL WORKSHOP ON MICROPROCESSORS
12-14 April 1978
Asilomar, California
"TECHNOLOGICAL TRENDS AND APPLICATIONS"

WORKSHOP PROGRAM

SESSION I  Wednesday, 2:00 P.M.  APPLICATIONS
Session Chairman: John Michael French, Synertek
1. Jack Landau, Singer Company; "Techniques for Table-Driven Processors in Industrial Sewing Machines"
2. Dennis Paull, Paull Associates; "Microprocessors in Medical Applications"
3. James Russell, Essex International; "Custom LSI for the Automotive and Appliance Industries"
4. John Michael French, Synertek; "The F-8 in Consumer and Industrial Applications"

SESSION II  Wednesday, 7:30 P.M.  DESIGN AIDS
Session Chairman: Mark Flomenhoft, Intel Corporation
1. Will Sherwood, Digital Equipment Corporation; "Experiences Combining Register-Transfer-Level and Logic-Level Simulation"
2. Jim Howard, Intel Corporation; "The Transparent Bus Concept"
3. Paul Drougowski, Ford Aerospace and Communications Corporation; "A Systems Methodology for the Design of Multiprocessor Systems"

SESSION III  Thursday, 8:30 A.M.  NEW CHIP ARCHITECTURES
Session Chairman: Bernard Peuto, Zilog Corporation
1. Bob Burlingame, Motorola, Incorporated; "The Motorola 6801"
2. Bernard Peuto, Zilog Corporation; "The Zilog Z-8"
3. John F. Wakerly, BNR; "Single-Chip Microcomputers"
4. Bruce Ravenel, Intel Corporation; "The Intel 8086"
5. Bernard Peuto, Zilog Corporation; "The Zilog Z-8000"
6. Leonard Shustek, Carnegie-Mellon University; "16-bit Microprocessor Architectures"
SESSION IV Thursday, 1:30 P.M. NEW SYSTEMS ARCHITECTURES
Session Chairman: John F. Wakerly, BNR
1. Ralph Schultz, Sperry Research; "Testing Philosophies and Techniques for Microprocessors"
2. Bert Forbes, Ziatech, Incorporated; "Standard I/O Structures for Microprocessors"
3. Dave Farber, University of Delaware; "A Distributed-Processing Office Automation System"
4. Ashok Dhawan, Computer Transmissions, Incorporated; "Microprocessors and Data Communication"
5. Archie Bowen, Ray Buhr, and Mahnum Sultan, Carleton University; "A Multi-Microprocessor Intelligent Terminals Project"

SESSION V Thursday, 7:30 P.M. OPEN DISCUSSION
Moderator: Fred Coury, Fred Coury Associates

SESSION VI Friday, 8:30 A.M. SOFTWARE ISSUES
Session Chairman: Charlie Bass, Zilog Corporation
1. Ken Burgett, Dharma Systems; "Software Requirements from an Independent versus an Industry Orientation"
2. Ken Bowles, University of California at San Diego; "A PASCAL-based, Machine-Independent Operating System"
4. Gary Kildall, Digital Research, "Relocatable Object Formats and Other Standardization Issues"
5. Dennis Allison, Independent Consultant; (to be announced)

FWC
11 April '78
SESSION I - Wednesday 2:00 PM - May 23
Interdevice Communications

Panel A

TOPIC: STANDARDS

Moderator: Prof. Alvin M. Despain - University of California, Berkeley

Speakers:
1. Robert G. Stewart, Stewart Research
   "IEEE Microcomputer Standards"
2. Cash Olson, Signetics
   "Future Bus"
3. Dennis Allison, Stanford University
   "Software Issues and Standards"

Panel B

TOPIC: MULTIPLE MICROCOMPUTERS

Moderator: Prof. Alvin M. Despain - University of California, Berkeley

Speakers:
1. David P. Patterson, University of California, Berkeley
   "Issues in Multiple Microcomputer Systems"
2. Peter G. Jessel, Digital Equipment Corporation
   "A Multiple - LSI-11 System"
3. Lucio Lanza, Intel Corporation
   "Issues in Multimicrocomputers"
4. John Banning, Zilog
   "Tightly Coupled Microprocessors"

SESSION II - Wednesday 7:30 PM
Technology Constraints and Implementation

Moderator: Prof. Carlo Sequin, University of California, Berkeley

Part A: Nick Treddenick, Motorola
"Implementation of the MC 68000"

Part B: Designing for Testability (Panel Discussion)
1. Keigi Muranaga, Fairchild
2. Ronald G. Walther, IBM
3. Andrew Stefanski, Hewlett-Packard
Part C:  
1. Dave Hodges, University of California, Berkeley  
   "The Future of Analog Circuits in VLSI"
2. Ted Hoff, Intel  
   "Analog and Digital Circuitry on One Chip in a Real Product"

Part D:  
The Impact of Lower Power Supply, Voltages (Panel Discussion)
1. Hal Muller, Burroughs Corporation
2. Peter Stoll, Intel
3. James Koo, National Semiconductor

SESSION III - Thursday 8:30 - May 24
Moderator: Joe Kennedy, Zilog
1. Steve Ward, Massachusetts Institute of Technology  
   "A View to Personal Computing"
2. John Ahlstrom, Bell Northern Research  
   "LSI Minicomputers"
3. Gregg Chesson, Bell Labs, Murray Hill, N.J.  
   "Data Kit: The Software Architecture"
4. Bruce Ravenel, Language Resources  
   "Implications of the Economics of Software on System Design"

SESSION IV - Thursday 1:30 PM
Support Devices
Moderator: J. Michael French  
Computer Avionics Corporation
1. Bruce Gladstone, Futuredata Corporation  
   "Development System Architectures to Support Multiple Microprocessor Systems"
2. Paul Heckel, Interactive System Consultants  
   "Prototyping Techniques Used in Developing a Language Translator"
3. Bob Gamble, Rockwell Corporation  
   "Extensions of the System 65 Development System"
4. Wilhelm Kahan, University of California, Berkeley  
   "Floating Point Standards"
SESSION V - Thursday 7:30
Open Discussion

Moderator: Fred F. Coury, Fred Coury Associates

SESSION VI - Friday 8:30 AM - May 25
New Directions and Architectures

Moderator: Prof. Forest Baskett, Stanford University

1. Guy Steele, Massachusetts, Institute of Technology
   "The LISP Machine Chip"

2. Forest Baskett, Stanford University
   "PASCAL and Virtual Memory on a Z-8000 Based Design Station"

3. Marc Overgaard, University of California, San Diego
   "PASCAL P-machines"
Wednesday - April 23rd:

SESSION I. "Special-Purpose Building Blocks"
2:00 p.m.
Chairman: Carlo Séquin, U.C. Berkeley
1. Carver Mead, Cal Tech, "A VLSI Design Methodology for the 1980s".
2. Jim Clark, Stanford University, "A Special-Purpose Arithmetic Engine for Graphics Applications".
3. Glenn Krasner, Xerox PARC, "The BITBLT".
4. Dick Lyon, Xerox PARC, "Special-Purpose Chips for Speech Processing Applications".
COFFEE BREAK
5. John Palmer, Intel, "The Intel 8087 Floating-Point Processor".

SESSION II. "Applications"
7:30 p.m.
Chairman: Stan Mazor, Intel
1. Dennis Pauli, Consultant, "Medical Applications".
2. John Wharton, Intel, "Microprocessor-Controlled Carburetion".
4. Richard W. Kovener, National Semiconductor, "A Power Seat with Memory".

SESSION III. "Technology"
8:30 a.m.
Chairman: Dick Anderson, Anderson-Bogert
1. Jim Knutt, Stanford University, "Integrated Sensors".
2. Bob Norman, Consultant, "The Application of VLSI Technology".
4. Tom Gunter, Motorola, "Designing Microprocessors Today".

Thursday, - April 24th:

SESSION IV. "Architectures"
1:30 p.m.
Chairman: Richard Zimmerman, Apple Computer Company
1. Hal Kop, Intel, "I/O Processing Using the 8089".
2. Skip Stritfer, Nestar, "Intermediate Languages and Their Applicability to Microprocessors".
3. Matt Townsend, Intel, "The Intel 2920".

SESSION V. "Open Discussion"
7:30 p.m.
Chairman: Fred Coury, Fred Coury Associates

Friday - April 25th:

SESSION VI. "Software"
8:30 a.m.
Chairman: Dennis Allison, Consultant
2. Bruce Ravenel, Language Resources, "Loading and Binding Considerations for PASCAL".
3. La Farr Stewart, Computer Avionics, "Le FORTH".
4. Marc Kaufmann, Kaufmann Research, "Execute-Only Memories".
5. Dennis Allison, Consultant, "A Toy Silicon Compiler".

04/22/80
SESSION I.  Technology  (Wednesday 1:30 - 5:00 PM)

Chairman: Peter Verhofstadt, Fairchild Semiconductor

2. Carlo Sequin, U C Berkeley, "Fabrication-Independent Layout".
3. Louis Scheffer, Hewlett-Packard Company, "A Constrained Methodology for Hierarchical Design".
4. William VanCleemput, Stanford University, "Developments in Hierarchical Computer Aided Design".

SESSION II.  Architectures  (Wednesday 7:15 - 10:00 PM)

Chairman: Lloyd Dickman, DEC, U C Berkeley

1. Les Kohn, National Semiconductor, "The NS 16000".
2. Mark Harrison and Terry Maletsky, Bell Laboratories, "The Bell Labs MAC-32".
4. Dave Patterson, U C Berkeley, "The RISC".

SESSION III.  Software  (Thursday 8:30 - 11:45 AM)

Chairman: Bruce Ravenel, Language Resources Corp.

3. Craig Maudlin, Renaissance Systems, "ADA: Relevant to Microcomputers?".
4. Larry Tessler, Apple Computer Company, "SMALLTALK: A Study in Object-Oriented Languages".
5. John Allen, The LISP Company, "LISP and Its Applications".
SESSION IV. Applications (Thursday 1:30 - 5:00 PM)
Chairman: Stan Mazor, Intel Corporation

1. Jack Irwin, National Semiconductor, "Low End Microprocessor Applications".

2. Tom Cook, American Sterilizer Company, "Microprocessors in Medical Sterilizers".


4. Rob Hoffman, First Systers Corp., "50,000 Lines of Code Later ..."

5. Bill Smith, Caere Corp., "Optical Character Recognition".

SESSION V. Open Discussion (Thursday 7:15 - 10:15 PM)
Chairman: Fred Coury, Consultant
(A rich Asilomar tradition.)

SESSION VI. Future Directions (Friday 8:30 - 11:45 AM)
Chairman: Dennis Allison, Consultant


2. George White, "Speech Recognition".

3. Dennis Allison, Consultant, "The Crystal Bell".

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PROGRAM COMMITTEE
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Dennis Allison                        * Consultant
Dan Conway                            Hewlett-Packard
Fred Clegg                            Hewlett-Packard
Fred Coury                            * Consultant
Al Despain                            U C Berkeley
Lloyd Dickman                         * DEC, U C Berkeley
Mike French                           Computer Avionics
Ted Laliotis                          Hewlett-Packard
Stan Mazor                            * Intel
Dave Patterson                        U C Berkeley
Bruce Pavenel                         * Language Resources
Peter Verhofstadt                     Fairchild
John Wakerly                          Consultant

* denotes Session Chairman

FWC
21 Apr 1981
Applications Wednesday, 13:30 - 17:00

Chairman: Larry Leifer, Stanford University

- Chuck Buckley, Stanford University.
  *Real-time Interactive Control of a Robot*

- William La, VA Rehabilitation Engineering and Development Center.
  *Control Requirements for an Omnidirectional Land Vehicle*

- Larry Leifer, Stanford University.
  *Interactive Robotics and Smart Product Design*

Software Wednesday 19:15 - 22:00

Chairman: Dennis Allison, Free Thinker

- Gary Kildall, Digital Research.
  *16 Bit Operating Systems*

- Jim Ready, Hunter & Ready.
  *Silicon Operating Systems*

- Robert Childs, Intel Corporation.
  *Operating System Issues and the Intel 286*

- Dick Karpinski, Volition Systems.
  *Modula II and Languages for Programming*

- Paul Heckel, Interactive Systems Consultants.
  *Programming Interactive Software*

- Dennis Allison, Wawona Research Group.
  *Managing Segmented Address Spaces*

Technology Thursday 08:30 - 11:45

Chairwomen: Irene Watson, Irene Watson Associates

- Dick Anderson, R. C. Anderson, Inc.
  *Multi Source: IC Design Supported by Multiple Fab Houses*

- Jeffery Siskind, MIT Lincoln Labs.
  *The Latest and Greatest Silicon Compiler*
• Jim Lipman, VLSI Technology.
  *Silicon Foundries: How They Support Custom IC Development*

• Richard Eden, Gigabit Logic.
  *Comparison of IC Technologies and the role of GaAs*

**Architecture Thursday 13:30 - 17:00**

Chairperson: Ted Laliotis, Hewlett-Packard

• Glen Edens, Grid Systems.
  *The Compass Computer and the Navigator System: A personal computing tool for executives*

• Jim Blackman and Jim Dowe, Excalibur Technologies.
  *A Multidimensional Adaptive Pattern Recognition Processor for Applications in Natural Language Processing and Voice Recognition*

• George White, Western Digital.
  *The WD-Nu Machine: a high performance workstation*

• Chandru Murthi, Computer Works.
  *Data Base Aspects and File Structure of the Pick Operation System*

• Alan Kay, Atari.
  *Thoughts on Personal Workstations*

**OPEN DISCUSSION Thursday 19:15 - 22:00**

Chairperson: Fred Coury, Fred Coury Associates

*A rich Asilomar Tradition. This is the free for all session in which you have the opportunity to say those things which you would regret in other contexts. Be sure to contact Fred early if you wish to say you piece.*

**Future Directions Friday 08:30 - 11:45**

Chairperson: Tom Whitney, Melchior Venture Management

• Dave Farber, Electrical Engineering Department, University of Delaware

• H. Yonezawa, Senior Engineer, Hitachi Microcomputer

• Lee Felsenstein, Vice President of Engineering, Osborn Computer

• Lynn Whuttington, Manager, Advanced Systems, Motorola Corporation
Ninth Annual IEEE
Asilomar Microcomputer Workshop
April 27-29, 1983

Technology: Peripherals for Microcomputers
WEDNESDAY, 13:30-17:00
CHAIRPERSON: L. C. HOBBS, HOBBS ASSOCIATES

- L. C. Hobbs, Hobbs Associates An Introductory Overview to Peripherals for Micros
- Jerry Drexler, Drexler Technologies Optical Cards for Microcomputers
- Jcb Eddy & Paul Ralston, Koala Technologies An Inexpensive Graphics Tablet
- Al Hoagland, IBM Magnetic Storage Trends for Microcomputers

Software: New Directions in Programming
WEDNESDAY, 19:15-22:00
CHAIRPERSON: DENNIS ALLISON, STANFORD UNIVERSITY

- Peggy Asprey, D.A.V.I.D. Systems Mixed Metaphors-Language-Independent Object-Oriented Software

- Marian Catclain & Bruce Daniels, Apple Computer Lisa's Software Architecture


- John Allen, The Lisp Company LOGO LISP and all that.

Hardware: Graphics
THURSDAY, 08:30-11:45
CHAIRPERSON: CARLO SEQUIN, U.C. BERKELEY

- Andy Bechtolsheim, SUN Microsystems The SUN Workstation

- Jim Clark, Silicon Graphics The Iris Graphics System

- Fred Langhorst, Digital Research GSX-A Software Virtual Device Interface

- Tom Clarkson, Graphics Software The Graphics Software Approach to Graphics Software
Applications: Medicine and the Arts
THURSDAY, 13:30-17:00
CHAIRPERSON: JOHN WARTON, APPLICATIONS RESEARCH

• Bob White & Les Atlas, Stanford University A Portable Real-time Speech Processor for Auditory Prosthesis

• Ted Adams, Medtronics A Portable Heart Monitoring and Recording System

• Kris Brown, Lucasfilm The Use of Microcomputers in Filming Cinematic Special Effects

• Robin Jigout, Syntauri The Use of Microcomputers in Music Synthesis

Open Discussion: A Rich Asilomar Tradition
THURSDAY, 19:15-22:00
CHAIRPERSON: FRED COURY, FRED COURY ASSOCIATES

Negotiate with Fred Coury for your moment of fame and glory. Everyone not on the formal program (and even those that are) are welcome to discuss whatever they wish subject to the whims of our interlutor.

Future Directions: Robotics, AI, CAD, and more
FRIDAY, 08:30-11:45
CHAIRPERSON: WAYNE AMACHER, APPLIED TECHNOLOGY

• Harry Tennant Artificial Intelligence: Natural Language Processing

• Moshe Gray, Daisy Systems Corporation Computer Aided Engineering: Vertical Integration of the Design Process

• John Wehring, EMV Associates Biochips: Biochips (Grow Your Own)

• Carl Helmers, Robotics Age Robotics: Carl Helmers and his robot friends.
Tenth Annual IEEE Asilomar Microcomputer Workshop
April 1984
FINAL PROGRAM

Wednesday, 1:30-4:00pm

Software: Allan M. Schiffman, Fairchild AI Lab.
Bill Kornfeld, Quintus
Larry Tesler, Apple
David Patterson, U.C. Berkeley

Wednesday, 4:15-5:00pm

Keynote
Carver Mead, Caltech

Wednesday, 7:15-10:00pm

Perspective: Jim Warren, DataCast
Bernard Peuto, Viewtech
Stanley Mazor, Intel
George Cox, Intel

Thursday, 8:30-11:45am

Applications: John Wharton, Applications Research
Gary Kildall, Digital Research
Al Alcorn, Cumma Research
Charles Hobbs, Hobbs Associates
Dick Lyon, Fairchild AI Lab
Matt Biewer, Pro-Log

Thursday, 1:30-5:00pm

Systems and Business: Jim Warren, DataCast
Bill Godbout, Compupro
George Morrow, Morrow Designs
Susan Nycum, Gaston Snow
Chuck Peddle, NNA
John Walker, Autodesk

Thursday, 7:15-10:00pm

Open Discussion: Fred Coury, Coury Associates
A rich Asilomar tradition.

Friday, 08:30-11:45

Futures: Dennis Allison, Stanford U.
Jack Grimes, ITT
Priscilla Lu, Bell Labs
Wednesday, April 17

1:30-1:35pm  Opening Remarks
John Wharton, Applications Research - Chairman

1:35-3:00pm  The U.C. Berkeley SPUR Project: LISP on a RISC
John Wakerly, DAVID Systems - Chairman

- Implementing LISP on a RISC
  James Larus, U.C. Berkeley
- The SPUR Microprocessor's Tagged Architecture
  George Taylor, U.C. Berkeley
- Memory Hierarchies for Shared-Bus Multiprocessing Systems
  Mark D. Hill, U.C. Berkeley
- Cache Coherency
  Susan J. Eggers, U.C. Berkeley

3:15-5:00pm  New Microprocessor/Microcontroller Architectures
Jesse Jenkins, Signetics - Chairman

- The 8x401 Microcontroller
  Ata R. Khan, Signetics
- Integrated Solutions for Third Generation "Mainframes"
  Cecil Kaplinski, Signetics
- Intro to the 80386 Architecture and Bus
  Ken Shoemaker, Intel

7:15-7:45pm  Keynote Address: Future Directions in Home & Personal Computing
Marcian E. Hoff, Consultant

7:45-10:00pm Real/Useful/Promising AI Systems on PC's
Ted Laliotis, Hewlett-Packard - Chairman

- Introduction to the AI Groundswell

  - Personal Computers as LISP Development Systems
    Stan Curtis, Gold Hill Computers
  - The M1 Expert System for PC's
    David King, Teknowledge
  - Natural Language Applications for Personal Computers
    Gary Hendrix, Symantec
  - The OPS5+ Development and Debugging System
    Paul Robertson, Artelligence
  - AI Systems on PC's
    Ken Ross, IntelliCorp
  - Expert Systems: Myth or Reality?
    Bruce D'Ambrosio, U.C. Berkeley
Thursday, April 18

8:30-10:15am Peripherals: Optical & Magnetic Storage
John Levy, Computer Structures, Inc. - Chairman

- Storage Industry Perspective
  Al Hoagland, Inst. for Information Storage
- Optical Storage for Small Computer Systems
  Leonard Laub, Vision Three, Inc.
- The Cygnet Electronic Filing System
  Jan Janku, Cygnet Systems, Inc.

10:30-12:00m Highly Personal Computers - Smaller is Different
Chuck Clanton, Consultant - Chairman

- Human Factors for Small Computers

10:30-12:00m Highly Personal Computers - Smaller is Different
Chuck Clanton, Consultant - Chairman

- Human Factors for Small Computers
  Jean-Jacques Grimaud, Assisted Intelligence Design, Inc.
- Growing Bonsai: Software for the Small Computer
  Paul Heckel, QuickView

1:30-3:45pm Dedicated Microprocessor Applications
Michael Slater, Gryphon Engineering - Chairman

- Innovative Applications of a Four-Bit Microcomputer
  Doug Littlejohn, Logical Services, Inc.
- The SMI Digitron Microprocessor-Based Pipette
  Bruce Koball, Bruce R. Koball, Inc.
- Light-Beam Communications
  Courtenay Heater, Romcor Design
- Multiprocessor Audio Computing
  David Schwartz, Compusonics
- Measuring Software Reliability in Single-Chip Applications
  Walter Banks, Bytecraft Ltd.

4:00-5:30pm Microprocessor Breakthroughs in Navigation Technology
Fred Clegg, Hewlett-Packard - Chairman

- Real-Time LORAN and GPS Applications
  Stan K. Honey, Etak Systems
- The Etak Vehicular Navigation and Display System
  Tim Brown, NASA Johnson Space Center
- PC Applications Aboard the Space Shuttle

7:00-11:00pm+ Open Discussion: A Rich Asilomar Tradition
Fred Coury, Fred Coury Associates - Referee

- All those not otherwise scheduled to speak, plus those
  who are, are strongly encouraged to make a short
  presentation on whatever topic(s) they wish. Contact
  Fred Coury to reserve your ten-minute time slot.
Friday, April 19

9:00-10:45am  Multiprocessing System Architectures
   Allan Schiffman, Schlumberger Computer Aided Systems - Chairman
   • Multiprocessor Architectures - An Overview
      Al Davis, Schlumberger Computer Aided Systems
   • Parallel Processing on the DADO Machine
      Sal Stolfo, Columbia University
   • The MIPS-X Multiprocessor
      Mark Horowitz, Stanford Computer Systems Lab

11:00-12:30pm  Rolling Your Own Silicon
   Stan Mazor, Silicon Compilers, Inc. - Chairman
   • Custom Silicon Support for Parallel Programming
      Gary Fielland, Sequent Systems
   • Megacell Building Blocks
      John Stockton, VLSI Technology
   • The Genesil Silicon Development System
      Sandy Wharton, Silicon Compilers, Inc.

12:45-3:00pm  Cookout & Informal Discussion
   • Forth, LISP, Biological Architectures, Hand Assembly,
     the 2800000, Symbol, etc.

Program Committee:

Chuck Clanton  Ted Laliotis  Fred Terman
Fred Clegg     John Levy    John Wakerly
Fred Coury     Stan Mazor   Sandy Wharton
Jesse Jenkins  Allan Schiffman John Wharton
               Michael Slater               

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TWELFTH ANNUAL
IEEE ASILOMAR MICROCOMPUTER WORKSHOP
APRIL 23-25, 1986

Wednesday, April 23

1:30-1:35pm  Opening Remarks
John Wharton, Applications Research - Chairman

1:35-3:00pm  Developments in Academia
John Wakerly, DAVID Systems - Chairman
  • Cache Performance Studies
    Anant Agarwal, Stanford University
  • Floating-Point and Co-Processor Interfaces
    Paul Hansen, U.C. Berkeley
  • A VLSI Architecture for Chess
    Carl Ebeling, Carnegie-Mellon University

3:15-5:00pm  ASµPs: Application-Specific Microprocessors
Bruce R. Koball, Motion West - Chairman
  • The µPD78312 Single-Chip Microcomputer for Process Control
    Bruce Gerhard, NEC Electronics, Inc.
  • The SMC8340 Eight-Bit Single-Chip Computer with Gate Array
    Art Kompolt, S-MOS Systems
  • The UC51 Custom Microcontroller Cell
    Sanjay Natu, Intel Corporation
  • User-Configurable ICs: A Logical Alternative
    Dave Saxby, Altera Corporation

7:15-8:30pm  Aesthetic Topics
Jesse Jenkins, Signetics - Chairman
  • Computers--Our Treacherous Ally
    George Morrow, Morrow Designs
  • Image Sensors, Portable Camera, and Credit-Card Memory
    Art Kompolt, S-MOS Systems
  • Update and Demonstration of Q&A
    Gary Hendrix, Symantec

8:45-10:30pm Desktop Publishing
Chuck Clanton, Consultant - Chairman
  • High-Resolution Printing Without a Frame Buffer
    Carolyn Bell, Adobe Systems Inc.
  • Design of a Multilingual Desktop Publishing Product
    Edward de Jong, Beyond Words
  • Electronic Publishing: Anything is Possible, Nothing Easy
    Bernard L. Peuto, Concord Consulting
Thursday, April 24

8:30-12:00n  High-Performance Micros
Stan Mazor, Silicon Compilers Inc. - Chairman

• Implications of Faster and Higher Integration Bit-Slice
  Jim Freeman, Cypress Semiconductor
• Branch Folding in the Bell Labs C Machine
  Rae McLellan, AT&T Bell Laboratories
• RISCs/Rewards
  Steuart Bjornsson, American Data Cable, Inc.

• The T414 Transputer: Concurring with RISC
  Pete Wilson, INMOS Corporation
• The Architecture of the MIPS RISC chip
  Skip Stritter, MIPS Computer Systems
• A VLSI Parallel Supercomputer
  John Palmer, NCUBE

1:30-4:00pm  Entertainment Technology
Courtenay Heater, Romcor Design - Chairman

• Problems of Digital Audio Applied to Film Making
  Tomlinson Holman, Lucasfilm Ltd.
• The MIDI Revolution
  Dave Oppenheim, Opcode Systems
• MIDI for the Masses
  Rick Parfitt, Audio Light, Inc.
• Synthesized Sound Libraries
  Bryan Bell, Synth-Bank

4:15-5:30pm  Orthogonal Shotgun: Ideas on Different Directions
Jim Warren, Wireless Digital, Inc. - Chairman

Provocateurs:
• Steve Edelman, Supermac Technology
• Bob McClure, Unidot, Inc.
• Jef Raskin, Information Appliance
• John Walker, Autodesk, Inc.

7:00-11:00pm+ Open Discussion: A Rich Asilomar Tradition
Fred Coury, Fred Coury Associates - Referee

• All those not otherwise scheduled to speak, plus those
  who are, are strongly encouraged to make a short
  presentation on whatever topic(s) they wish. Contact
  Fred Coury to reserve your ten-minute time slot.
Friday, April 25

9:00-10:45am Design and Development Tools
Michael Slater, Gryphon Engineering - Chairman

- An Overview of Development System Trends
  Michael Slater, Gryphon Engineering
- The Integral C Programming Environment
  Jim Besemer, Tektronix, Inc.
- The SoftAnalyst Software Performance Analysis System
  Bruce Ableidinger, Northwest Instrument Systems
- In-Circuit Emulation and the Future of Development Systems
  Keith Payea, Applied Microsystems Corporation

11:00-12:45pm Optical Disk Technology and Applications
Ted Laliotis, Hewlett-Packard - Chairman

- The Optical Memory Industry - Where it is, Where it's Going
  Edward S. Rothchild, Rothchild Consultants
- CD-ROMs and Project Xanadu
  Thomas A. Rolander, KnowledgeSet Corporation
- The Compact Video Disc
  Lowell Noble, SOCS Research
- Observations and Conclusions on Optical Storage
  Leonard Laub, Vision Three Inc.

1:00-3:00pm Cookout & Informal Discussion
RISC vs. CISC vs. Biological Architectures,
the Z800000, SDI, Symbol, Chapter 11, etc.

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Program Committee:

Chuck Clanton  Bruce R. Koball  John Wakerly
Fred Clegg     Ted Laliotis    Jim Warren
Fred Coury     Stan Mazor      Bob Wedig
Courtenay Heater Michael Slater  John Wharton
Jesse Jenkins  Fred Terman     Sandy Wharton

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Wednesday, April 22

1:20-1:30pm Opening Remarks
John Wharton, Applications Research - Workshop Chairman

1:30-3:15pm Microcomputer Recreations
John Wharton, Applications Research - Session Chairman
- Inverse-Parser User Interfaces
  Chris Crawford, Freelance Game Designer
- The Lure of Abstract Systems
  A.K. Dewdney, University of Western Ontario
- The Beauty of Fractals
  Heinz-Otto Peitgen, UC Santa Cruz

3:30-5:00pm Image Processing and I/O Devices
Daniel E. Brown, Award Software - Session Chairman
- Commercial Applications of High-Quality Graphics
  Alvy Ray Smith, Pixar
- Optical Data Entry: Constraining the Problem is Not the Solution
  James Faulkerson, TransImage Corp.
- RCA's DVI: CD-ROM + VLSI ASICs
  Stan Mazor, Silicon Compiler Systems Corp.

7:00-8:30pm Neural Computing: Biological Background
Fred Coury, Fred Coury Associates - Session Chairman
- Introduction to Neural Computing
  Fred Coury, Fred Coury Associates
- Biological Nervous Systems
  Chuck Clanton, Consultant
- Neural Net Modeling
  Mark Jurik, ESL

8:45-10:30pm Neural Computing: Hardware and Applications
Bruce Koball, Motion West - Session Chairman
- Real-Time Visual Computation Using Custom Analog CMOS VLSI
  Massimo Sivilotti, California Institute of Technology
- Flow-of-Activation Networks (FAN): A Novel Computing Mechanism
  Claude A. Cruz, IBM
- Wafer-Scale Integrated Neural Computing: Do Two Rights Make a Wrong?
  Dan Hammerstrom, Oregon Graduate Center
- Pattern Recognition of Brain Signals
  Alan S. Gevins, EEG Systems Lab
Thursday, April 23

8:30-10:00am  Windowing Environments
   Chuck Clanton, Consultant - Session Chairman
   • Distributed Computing with the MIT X Window System
     Jon Brewster, Hewlett-Packard
   • NeWS, Windows, and Unix
     David S.H. Rosenthal, Sun Microsystems
   • The InterViews Advanced Windowing System
     Mark Linton, Stanford University

10:15-11:45am  New Wave Networks
   Marc Kaufman, Kaufman Research - Session Chairman
   • Conceptual Models for PC to Fax
     H.S. Magnuski, Gamma Technology, Inc.
   • Hoi Polloi Networks
     Josiah Hoskins, MCC
   • Potholes in the Highways of the Mind
     David R. Hughes, Chariot Communication

1:30-3:15pm  Microprocessor Applications
   Michael Slater, Gryphon Engineering - Session Chairman
   • A Networked Control System with Lots and Lots of CPUs
     Michael Slater, Gryphon Engineering
   • Alexis: A True Omnidirectional Wheelchair Revisited
     Doug Littlejohn, Logical Services Inc.
   • Operation and Control of the Space Station Robot Servicers
     Brian Lockyear, Booz, Allen, and Hamilton
   • PC Compatibility and 32-Bit Bus Extensions
     Holden D. Jessup, Olivetti

3:30-5:15pm  Athematic Topics I
   Courtenay Heater, Romcor Design - Session Chairman
   • Software Considerations for WORM Optical Disk Systems
     Brian A. Berg, Berg Software Design
   • A Proposal to Bring Software and Logic into the Intellectual Property System
     E. Steuart Bjornsson, American Data Cable, Inc.
   • The Mechanical Universe: Visual Icons for Teaching Physics
     James F. Blinn, Jet Propulsion Lab
   • Managing Creativity
     Allan Alcorn, Apple Computer

7:15-11:00pm+  Open Discussion: A Rich Asilomar Tradition
   Fred Couy, Fred Coury Associates - Moderator
Friday, April 24

8:45-10:15am  µC Law

The Honorable Dr. Robert G. Wedig, Wedig Consulting Services - Presiding

• The $100,000,000 Question: Data General and Software Bundling
  Chris Martiniak, Feldman, Waldman, and Kline
• µCode Copyright Infringement: Compatibility, Random Logic, & the Clean Room Process, Dan Siegel, Skjerven, Morrill, MacPherson, Franklin, & Friel
• Copyright in Software 'Look and Feel'
  Doug Derwin, Skjerven, Morrill, MacPherson, Franklin, & Friel

10:30-12:30pm  Aesthetic Topics II

Dr. Jinx, Signetics - Session Chairman

• The 1750A CPU: An Implementation Technology Benchmark
  Ken Karakotsios, Silicon Compiler Systems Corp.
• Quasi-Formal Pseudo-Proof of Likely Correctness in an IEEE Floating-Point Micro, Pete Wilson, Inmos
• The Standard that Isn't: An Add-In Board Designer's View of PC Compatibility, Trevor G. Marshall, Definicon Systems Inc.
• Assessment of Technological Long-Shots
  Dennis Allison, Stanford University

12:45-2:00pm  Cookout and Informal Discussion

Nondeterministic Automata and Fuzzy Math, Massive Parallelism, the Z680486, Symbol, Triskaidekaphobia, etc.

Program Committee:

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<tr>
<th>Dan Brown</th>
<th>Marc Kaufman</th>
<th>John Wakerly</th>
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<td>Chuck Clanton</td>
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Fourteenth Annual Asilomar Microcomputer Workshop
April 27-29, 1988

Wednesday, April 27

1:20-1:30pm Opening Remarks, John Wharton, Applications Research – Chair

1:30-3:00pm Advances in Academia, John Wakerly, David Systems – Chair
- Gary Delp, University of Delaware
  Shared-Memory Local Area Networking
- Frank Grulio, San Francisco State University
  Self-Virtualizability of the 80386
- Michael Smith, Stanford University
  Breaking the IPC Barrier

3:30-5:00pm Computer-Aided Perception, John Wharton, Applications Research – Chair
- Scott Fisher, NASA Ames Research Center
  Telepresence and Virtual Environment Display Systems
- Jean-Jacques Grimaud, VPL Research, Inc.
  From Data Glove to Data Suit
- Greg Kovacs, Stanford University
  A Digital Axonal Interface to Human Nerve Fiber Bundles

7:00-10:30pm Academic Short Talks, Bob Wedig, Wedig Consulting Services – Chair
- David Rosenthal, Sun Microsystems
  Avoiding Camels in Committee Design Standards
- Kim Rubin, Force Computers Inc.
  Why Everything You Know About RISC is Wrong
- Gary Schwede, Consultant
  Making Hardware Hard to Clone, Even if You’re Not IBM
- Marty Graham, UC Berkeley
  Ethernet Through Standard Telephone Lines
- Jim Blinn, Cal Tech
  Educational Animation
- Tom Walker, Millenia Design Group
  Piezomotors
- John Walker, Autodesk, Inc.
  Experiments with Artificial Life
- Brian Kelly, Lucasfilm
  High-Resolution Sound Processing
- Todd Rundgren, Utopia Software Development
  Interface Design for Enhanced Creativity
- Nolan Bushnell, Axlon
  Robots in the Office of the Future
Thursday, April 28

8:30-10:00am Order Out of Chaos, Bruce Koball, Motion West – Chair
- Ted Kaehler, Apple Computer
  Randomness and the Ratchet: Program Evolution
- Rudy Rucker, San Jose State University
  Cellular Automata: Symbiotic Programming on the CAM-6
- Julian Uschersohn, VLSI Technology, Inc.
  Chaotic Dynamical Systems for Pedestrians

10:30-12:00n Child's Play: Computing at an Early Age, Bruce Koball, Motion West – Chair
- Ron Milner, Applied Design Laboratories
  The Future of Smart Toys
- Chad Mitchell, Great Wave Software
  Educational Software and Creativity
- Ann McCormick, Picodyne Corporation
  Video Play: Interactive Video for Children
- Mike Clark, Apple Vivarium Project
  Leveraged Learning: HyperLego

1:30-3:15pm µP Device Architecture, Michael Slater, MicroDesign Resources – Chair
- Robert Garner, Sun Microsystems
  SPARC and the Future Directions of µP Architecture
- Mike Johnson, Advanced Micro Devices
  The Architecture of the AMD 29000
- Mitch Alsup, Motorola, Inc.
  The Motorola 88000
- Lionel Smith, Intel Corporation
  The 80960 Architecture in Embedded Control
- Brian Case, Apple Computer
  RISC Emulation of Existing Architectures

3:45-5:00pm µP Directions Panel Discussion, Michael Slater, MicroDesign Resources – Chair
Above speakers to be joined by:
- Bill Moyer, Motorola, Inc.
- David Schanin, National Semiconductor
- Ken Shoemaker, Intel Corporation
- Skip Stritter, MIPS Computer Systems

7:00-11:00pm Open Discussion: A Rich Asilomar Tradition
  Jesse Jenkins, Signetics – Acting Moderator
  (Contact Dr. Jinks any time after registration for time slot assignment)
Friday, April 29

8:30-10:00am Quick-Turn ASICs & Design Technology
  Sandy Whanton, Silicon Compiler Systems Corporation – Chair
  • David Wood, UC Berkeley
    Functional Simulation of a Cache Controller
  • Ken McElvain, Silicon Compiler Systems Corporation
    ATG – How to Tell if Your ASIC Really Works
  • Bill Barrett, LASA Industries, Inc.
    Direct Laser Gate Array Customization & ASIC Strategies

10:30-12:00n Orthogonal Shotgun, Jim Warren, Silicon Gulch Gazette – Chair
  • Steve Edelman, SuperMac Technology
  • Ted Nelson, Autodesk, Inc.
  • Ron Henley, University of San Francisco
    ...and other provocateurs

12:30·3:00pm Lunch and Informal Discussion, Monterey Bay Aquarium
  • Mike Lee, Monterey Bay Aquarium Research Institute – Integration of
    Instruments and Computers for Multimedia-Based Underwater Research
  • Aquarium Tour

Program Committee:

Fred Clegg  John Wakerly  Fred Terman
Fred Coury  Bruce Koball  Jim Warren
Courtenay Heater  Ted Laliotis  Bob Wedig
Marc Kaufman  Stan Mazor  John Wharton
Jesse Jenkins  Michael Slater  Sandy Whanton
Fifteenth Annual Asilomar Microcomputer Workshop
April 26–28, 1989

Wednesday, April 26

1:20-1:30pm Opening Remarks, John Wharton, Applications Research – General Chair

1:30-3:00pm Technology Updates, Brian A. Berg, Berg Software Design – Chair
  • Khaled El-Ayat, Actel Corporation
    Architecture and Testability of Anti-fuse Field-Programmable Gate Arrays
  • Eric Amador, Amador Designs
    Tools and Techniques for ASIC Design and Verification
  • Patrick Boyle, Stanford University
    Hardware/Software Considerations for Cache Design

3:30-5:00pm Emerging Trends in Data Handling, Brian Berg, Berg Software Design – Chair
  • Keith Gunn, Document Automation Consulting
    Applications Created by Data Compression Technology
  • Leonard Laub, Vision Three Incorporated
    Important New Technologies Which Have Not Yet Saved the Industry
  • Bob Evans, Teletext Communications, Inc.
    Teletext Today and in the Future

7:00-8:30pm Athematic Short Talks, Bob Wedig, Wedig Consulting Services – Chair
  • Stan Mazor, Synopsis
    Alternatives to Random Logic
  • Bruce Ableidinger, Cadre–MicroCASE
    Alternatives to ICE for RISC
  • Dennis Allison, Stanford University
    Fundamental Limits
  • Robert G. Kennedy III, Douglas Aircraft Company
    Technological Threats to Civil Liberties
  • Bob Jacobson, California State Assembly Utilities & Commerce Committee
    A Computer User's Bill of Rights

9:00-10:30pm More Athematic Short Talks, Bob Wedig, Wedig Consulting Services – Chair
  • Dan Shapiro, Advanced Decision Systems
    The Astronaut and the Banana Peel: An EVA Retrieval Scenario
  • Alan Norman, ETAK Incorporated
    ETAK: The Perils of Being Too Soon
  • Michael R. Levy, Technology Strategies Incorporated
    The VC Marriage Broker
  • Peter Antoniak, Solar System Software
    Self-Publishing on a Shoestring
  • Ron Milner, Applied Design Labs
    Pushing the Envelope in High-Tech Toy Design
Thursday, April 27

8:30-10:00am Household Networks and Entertainment Technology, Ted Laliotis, Hewlett-Packard – Chair
  • Barry Bronson, HP Labs
    HDTV: Current Overview and Future Directions
  • Don Pezzolo, Diablo Research Corporation
    CEBus: The Emerging Home-Automation Standard
  • Bob Dolin, Echelon Systems
    Local Operating Networks (Consumer/Industrial Applications)

10:30-12:00n Vaguely Sound-Related Stuff, Brian Case, Consultant – Chair
  • Malcolm Slaney, Apple Computer
    Implementing Cochlear Models
  • David Schwartz, CompuSonics
    SCSI Audio and CSX
  • Robert Sloan, Cube Root
    The Digital Audio Standard: AES/EBU

1:30-3:00pm Superscalar Architectures, Michael Slater, MicroDesign Resources – Chair
  • Mike Johnson, Advanced Micro Devices
    Limits to Concurrency
  • Val Popescu, Metaflow Technologies
    The Metaflow Architecture
  • Mitch Alsup, Motorola
    Multiple-IPC CPUs for Sequential Instruction Sets
  • Nick Tredennick, Tredennick, Inc.
    Speeding Up CISC Processors

3:30-5:00pm New Microprocessors, Michael Slater, MicroDesign Resources – Chair
  • Steve McGeady, Intel Corporation
    Intel 80960 Futures
  • Neal Margulis, Intel Corporation
    The Intel i860 Architecture and Applications
  • Ken Shoemaker, Intel Corporation
    Inside the Intel 80486
  • Pat LaViolette, Motorola
    The 68332 – a 68020-Based Microcontroller

7:00-11:00pm Open Discussion: A Rich Asilomar Tradition
  Fred Coury, Fred Coury Associates – Moderator
  (Contact Fred any time following registration for time slot assignment)
Friday, April 28

8:30-10:00am Object-Oriented Programming Tools, Bruce Koball, *Motion West* – Chair
- Neal Goldstein, *Neal Goldstein Design Inc.*
  Adventures in Object-Oriented Programming
- John Loram, *Bio-Engineering Research Labs*
  Development and Debug Problems in Real-Time Environments
- Mel Pirtle, *Savoir*
  Object-Oriented Methods and Tools for Real-Time Environments

10:30-12:00n Electronic Freedom, Privacy, and Civil Liberties, Jim Warren – Chair
- Gary Chapman, *Computer Professionals for Social Responsibility*
  Civil Liberties Issues & Computing in the USSR

Panel Discussion
- Robert G. Kennedy III, *Douglas Aircraft Company*
- Lee Felsenstein, *Golemics, Inc.*
- Mary Eisenhart, *MicroTimes*
- Gary Chapman, *CPSR*

12:30-2:30pm Lunch and Informal Discussion
*Barbeque/Picnic Area*

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Program Committee:

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<th>Brian Berg</th>
<th>Marc Kaufman</th>
<th>Fred Terman</th>
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Sixteenth Annual Asilomar Microcomputer Workshop
April 18-20, 1990

Wednesday, April 18

1:20–1:30pm Opening Remarks, John Wharton, Applications Research Inc. – General Chair

1:30–4:45pm Technology and Standards Update, Jim Warren, DataCast – Chair
  • Peter Chen, University of California/Berkeley
    Redundant Arrays of Inexpensive Disks (RAID)
  • Joe Decuir, Everex Systems/Cygnent Division – Telecommunications for Microcomputers: Advances in Modems and Fax Modems
  • Ronald B. Arps, IBM Almaden Research Center
    Research Toward a Standard for Progressive Bi-Level Image Compression
  • John Newkirk, Peregrine Display Technology
    HDTV Perspective
  • Paul Saffo, Institute for the Future
    Making Sense of Groupware
  • Bob Jacobson, Human Interface Technology Lab
    State and Federal High-Technology Industrial Practices
  • Robert G. Kennedy III, McDonnell-Douglas Corporation
    Technological Threats Revisited: Big Brother Part II

7:00–10:30pm Athematic Short Talks, Bob Wedig, Wedig Consulting Services – Chair
  • Daniel G. Shapiro, Advanced Decision Systems
    Dark Matter
  • Leonard Laub, Vision Three Incorporated
    Boring but Profitable Multimedia Applications
  • Allan Alcorn, Apple Computer
    Multimedia at Apple
  • Nancy Blachman, Variable Symbols
    Developing Help Facilities for Sophisticated Software
  • Jim Blinn, Cal Tech
    Animated Education and Project "Mathematics!"
  • David M. Schwartz, CompuSonics
    Pay Per Listen
  • Steve Purcell, C-Cube Microsystems
    CCITT/ISO JPEG & MPEG ASICS
  • Carl Helmers, Helmers Publishing, Inc. – High-Temperature Superconductivity: Why We Won't Have A Workstation in a Dewar Jar This Year
  • Paul Saffo, Institute for the Future
    The Zen of Technological Change
Thursday, April 19

8:30-12:00n  Emerging Technologies, Bruce Koball, *Motion West* – Chair
  • Stan Tomlinson, *Neural Semiconductor*
    Implementing Neural Networks in VLSI
  • Mark Holler, *Intel Corporation* – Analog Circuits and Floating-Gate Devices for
    Neural Network Implementations
  • Carlos Tapang, *Syntonic Systems, Incorporated*
    Adaptive Resonance in Silicon
  • Howard Davidson, *Sun Microsystems*
    IC Packaging Isn’t Just Seymour’s Problem
  • Joe Tate, *Ambient Research*
    ElectroSeismic Phenomena
  • Mark Jurik, *Ed-U-Tech Productions*
    Automated Urban Reverse Engineering
  • Julian Uschersohn, *Dazix*
    Fundamental Limits to Computation

1:30-5:00pm  Multimedia, Hyperspace, and Virtual Reality, Brian A. Berg, *Berg Software Design* – Chair
  • Mark Heyer & Martine Boot, *Heyer Tech*
    Engineering Information Systems for Maximum Bandwidth
  • Abbe Don, *In Context*
    Interactive Narrative: An Oxymoron?
  • Chip Krauskopf, *Intel Corporation*
    The DVI Multimedia Office of ’92
  • Bernard Peuto, *Sun Microsystems*
    Digital World: The Evolution of Multimedia
  • Eric Gullichsen, *Sense8*
    Making Virtual RealityCommercially Possible
  • Eric Lyons, *Autodesk*
    Virtual Reality & Hyperspace: Does the Emperor Wear Virtual Clothes?
  • Jaron Lanier, *VPL Research*
    The Dawn of the RealityNet

7:00-11:00pm  Open Discussion: *A Rich Asilomar Tradition*
    Fred Coury, *Fred Coury Associates* – Moderator
    (Contact Fred any time following registration for time slot assignment)
Friday, April 20

8:45–11:45am Microprocessor Technology, Marc Kaufman, Kaufman Research – Chair

- Bill Ledbetter, Motorola
  The Motorola 68040 Design Methodology
- Steve McGeady, Intel Corporation
  Intel’s Next-Generation High-Performance i960 Microprocessor
- Martin Schmookler, IBM
  RISC System/6000 Processor Architecture and Organization
- Bruce Ableidinger, Cadre Technologies
  Visibility into the Dynamics of Real-Time Systems
- Pete Wilson, Ex-Prisma
  How to Screw Up a GaAs Workstation Startup

1:00–3:00pm Technology’s Role in Changing Society, John Wharton, Applications Research Inc. – Moderator

- Allan Alcorn, Apple Computer
- Lee Felsenstein, Golemics, Inc.
- Matthew T. Kaufman, University of California at Santa Cruz
- Robert G. Kennedy III, McDonnell-Douglas Corporation
- Carlos Tapang, Syntonic Systems
- Julian Uschersohn, Dazix

Innovation and Intellectual Property Laws, Michael Slater, MicroDesign Resources – Moderator

- Peter Antoniak, Solar Systems Software
- Allen Baum, Apple Computer
- Chris Martiniak, Feldman Waldman and Kline
- David Rosenthal, Sun Microsystems

Technology Forecast, Nick Tredennick, Tredennick, Inc. – Moderator

- Bruce Ableidinger, Cadre Technologies
- Bernard Peuto, Sun Microsystems
- Kim Rubin, GreenSpring Computer
- Paul Saffo, Institute for the Future
- Abigail Shaw, Shaw Consulting
- John Walker, Autodesk

Program Committee:

| Brian Berg | Marc Kaufman | Fred Terman |
| Brian Case | Bruce Koball | John Wakerly |
| Fred Clegg | Ted Laliotis | Jim Warren |
| Fred Coury | Stan Mazor | Bob Wedig |
| Mary Eisenhart | Ken Shoemaker | John Wharton |
|             | Michael Slater |            |
Seventeenth Annual Asilomar Microcomputer Workshop
April 24–26, 1991

Wednesday, April 24

1:20–1:30pm Opening Remarks, John Wharton, Applications Research, Inc. — General Chair

1:30–3:00pm Data Input and Delivery Systems, Brian Berg, Berg Software Design — Chair
  • Phil Bernzott, Consultant
    An Overview of the State of OCR Technology
  • Jim Montgomery, Opcode Systems, Inc.
    PageBrush: A Hand-Held Page Scanner and Mouse
  • Lee Felsenstein, Reddy Information Systems
    RED: A Portable CD-ROM-based Information System

3:30–5:00pm Data Compression, Brian Berg, Berg Software Design — Chair
  • William Elswick, Ediflex System
    An Overview of Digital Audio Interchange and Compression
  • Ron Arps, IBM Research Division
    Does Using JBIG Imply an Absence of Gray Matter?
  • Adriaan Ligtenberg, Storm Technology
    How Color Will Change the Computing Environment of the ’90s

7:30–10:30pm Athematic Short Talks, Robert Wedig, Wedig Consulting Services — Chair
  • Leonard Laub, Vision Three, Inc.: The Underlying Limits of Data Compression: Thermodynamics in Your Computer
  • David Patterson, UC Berkeley
    Cheap Gigabytes: Adding a New Layer to the Memory Hierarchy
  • Mark Jurik, Jurik Research
    Comparative Control Techniques
  • Tony Requist, GeoWorks
    The GEOS Operating System
  • Bob Dolin, Echelon
    The LONBUILDER Development System for Distributed Control
  • Dan Siegel, Irell & Manella
    Recent Developments in Software Patent and Copyright Law
  • Chad Mitchell, Great Wave Software
    Interface Design for Children's Programs
  • Carol Curry, Silicon Graphics
    What Do Women Really Want?
  • Bruce Lightner, Metaflow Technologies
    Zen and the Struggle Between Communism and RISC
Thursday, April 25

8:15–10:00am Egregiously Parallel Computers, Fred Clegg, *Raynet* — Chair
- Peter Christy, *MasPar Computer*
  Why Massive Parallelism Now, and How?
- Greg Papadopoulos, *MIT Laboratory for Computer Science*
  All Parallel Machines Will Look The Same
- Jeff Deutsch, *Deutsch Research*
  Multiprocessor Personal Computers
- Brewster Kahle, *Thinking Machines Inc.*
  Wide-Area Information Servers: A Supercomputer on Every Desk

10:30–12:00p Better User Interfaces, Chuck Clanton, *Aratar* — Chair
- Chuck Clanton, *Aratar*
  Time, Space, and User Illusion
- Doug Blewett, *AT&T Bell Labs*
  Toolkit Graphics
- Robert Carr, *Go Corporation*
  Why PenPoint?

1:30–3:00pm The Matrix: Worldwide Personal Networks, Bruce Koball, *Motion West* — Chair
- Dave Farber, *The University of Pennsylvania*
  NREN and the Future of Populist Computing
- John S. Quarterman, *Texas Internet Consulting*
  Electronic Publishing Via Networks
- Mark Graham, *Pandora Systems*
  Exploring the Matrix with a Cyberspace Cockpit

3:30–5:00pm Settling the Electronic Frontier, Bruce Koball, *Motion West* — Chair
- Jim Warren, *DataCast*
  Computer Freedom and Privacy
- Mitch Kapor, *The Electronic Frontier Foundation*
  Civil Liberties in Cyberspace
- John Perry Barlow, *Grateful Dead Productions*
  Bringing the Settlers In

7:00–7:30pm Ad Hoc Working Group: Can Bill Gates Be Stopped? John Wharton, *Xanthrax Communications* — Moderator

7:30–11:00pm Open Discussion: A Rich Asilomar Tradition, Jim Warren — Timemaster
(Contact Jim any time after registration for time slot assignment.)
Friday, April 26

Dawn Beach Walk


How much longer will chip designers be able to continue the performance advances of the past? Which new implementation techniques are worth the hassle, and which are just marketing hype? What's the rationale for moving beyond 32 bits? Does architecture really matter?

Panel discussion participants will include:
- Don Alpert, Intel Corporation
- Keith Diefendorff, Motorola
- Mike Johnson, AMD
- Bruce Lightner, Metaflow Technologies
- Tom Riordan, MIPS Computer Systems
- Alon Shacham, National Semiconductor

1:00–3:00pm Open Discussion:
- The Ills of Engineering Education, Nick Tredennick, TechNerds — Moderator
- Selling Our Souls to Foreign Competition, Brian Case, Consultant — Moderator
- How to Make Technology Exciting, Courtenay Heater, Romcor Design — Moderator

Program Committee:

Brian Berg
Brian Case
Chuck Clanton
Fred Clegg
Fred Coury
Mary Eisenhart
Marc Kaufman
Bruce Koball
Ted Laliotis
Stan Mazor
Ken Shoemaker
Michael Slater
Fred Terman
Nick Tredennick
John Wakerly
Jim Warren
Bob Wedig
John Wharton
Wednesday, April 22

1:30–1:40pm Opening Remarks, John Wharton, Applications Research — General Chair

1:40–3:00pm Wireless Networking Technology, Brian Berg, Berg Software Design — Chair
- Alan Frank, *M&T Publishing*
  Working Without Wires
- Robert Stillman, *Theseus Technologies*
  RF-Based Modems and WANs
- Dewayne Hendricks, *Tetherless Access, Ltd.*
  Recent Developments in Wireless Metropolitan-Area Networks (MANs)

3:30–5:00pm Network Applications and Online Services, Jim Warren, *Autodesk/MicroTimes* — Chair
- Marc Stiegler, *Xanadu-AMIX*
  Implementing Online Marketplaces for Information and Consulting
- Dave Farber, *University of Pennsylvania*
  The Dirt Road to the Gigabit Highway
- Erik Fair, *Apple Computer*
  What Happens After We All Connect Up?

7:30–10:30pm Athematic Short Talks, Robert Wedig, *Wedig Consulting* — Chair
  Can Enhanced NTSC (QDTV) Rival HDTV?: Cost vs. Quality
- Bill Elswick, *Ediflex Systems*
  Silicon Behind the Silver Screen: A Computer Audio Editing System
- Allan Alcorn, *Digital FIX*
  Desktop Video Authoring Tools
- Vic Kley, *Stylus*
  A Vision of Second-Generation Pen Computing
- Paul Monus, *British Petroleum Chemicals*
  Life-or-Death Applications
- George Rikker, *iN Machines*
  Microkernels: The Next Wave of Operating System Architectures
- Mark Heyer, *HeyerTech*
  Long-Term Memory and the Potential for Sentient Machines
- Larry Press, *CSUDH*
  Computer Communications During the Soviet Coup
- Kim Rubin, *GreenSpring Computers*
  Using Technology to Locate Urban Gunfire
Thursday, April 23

8:30-10:00am  Future Technology: Leading Edge and Beyond, Bruce Koball, Motion West — Chair
- Julian Uschersohn, Hitachi MicroSystems Inc.
  Fuzzy Logic Tutorial
- John Gilmore, Cygnus Support
  Cryptography Update and Anonymous Cash
- Eric Drexler, Foresight Institute
  Molecular Manufacturing and Computation

10:30-12:00n  New Microprocessor Architectures, Michael Slater, Microprocessor Report — Chair
- Dennis Allison, HaL Computer Systems, Inc.
  A High-Performance Implementation of SPARC
- John Sell, Apple Computer
  PowerPC Architecture Rationale
- Mike Uhler, Digital Equipment Corporation
  DEC Alpha: Why a New RISC?

Panel Discussion: Does Microcomputer Architecture Really Matter?
  Michael Slater, Microprocessor Report — Moderator
Panelists will include the above speakers, to be joined by:
- Keith Diefendorff, Motorola
- Ken Shoemaker, Intel Corporation

1:30-3:00pm  Multimedia Tools and Applications, Brian Berg, Berg Software Design — Chair
- Mark Gang, Starlight Networks
  LAN-Based Digital Video
- Frank Schwartz, Forward Motion
  Multimedia Glue: Bonding the Pieces with Extended Control
- Adriaan Ligtenberg, Storm Technology
  Simplifying Color Publishing
- Janey Fritsche, TechnoTribe
  Interactive Multimedia as a Force for Good

3:30-5:00pm  New User Interfaces, Chuck Clanton, Aratar — Chair
- Cary Kornfeld, Princeton University
  Stereo Television
- Emilie Young, EmVision
  Story And User Interface Design
- Chuck Clanton, Aratar
  Animated Environments

7:30-11:00pm+  Open Discussion: A Rich Asilomar Tradition, Mary Eisenhart, MicroTimes — Timemaster
  (Contact Mary any time after registration for time slot assignment.)
Friday, April 24

7:30–9:00am Self-Study Beachwalk
[Attendance optional]

9:30–10:45am Competitiveness and Intellectual Property, Bruce Koball, Motion West — Chair
• Walter Banks, Byte Craft Ltd.
  A World Competitive Environment
• Chris Martiniak, Feldman, Waldman & Kline
  When Does Innovation Become Invention?
• Dan Siegel, Weil, Gotshal, & Manges
  Litigation Update
• Jerry Klein, The Chatham Group
  The Dark Side of the Valley: Why the Intellectual Property Wars Must Be Fought

10:45–11:30am Software Monopolies: Mob Debate
• Jim Warren, Autodesk/MicroTimes — Moderator
• Susan Nycum, Baker & McKenzie — Provocateur

11:30am Conference Wrap-Up and Closing Remarks

12:00–1:30pm Outdoor Barbeque Lunch

1:30–3:00pm Free-Form Reception/Group Discussion/Open Debate

Program Committee:

| Brian Berg        | Marc Kaufman | Fred Terman |
| Brian Case       | Bruce Koball | Nick Tredennick |
| Chuck Clanton    | Ted Laliotis | John Wakerly |
| Fred Clegg       | Stan Mazor   | Jim Warren |
| Fred Coury       | Ken Shoemaker | Bob Wedig |
| Mary Eisenhart   | Michael Slater | John Wharton |
Wednesday, April 28

1:30–1:40pm Opening Remarks — John Wharton, Applications Research, General Chair

1:40–3:00pm Technology Update: Interface Standards — John Wakerly, Alantec, Chair
  • Joe Decuir, Microsoft Corporation
    The State of the Art in Dial-Up Communications
  • Dave Newman, Alantec
    100 MBPS LANs
  • Dan Bezzant, Cirrus Logic, Inc.
    PCMCIA Design and Applications

3:30–5:00pm Technology Update: The Software Crisis — John Wakerly, Alantec, Chair
  • John Nagel, Stanford University
    The Programming Language Mess
  • Mark G. Lentczner, Glyphic Technology
    Implementing the Future: A Language Designer's View
  • Jack Grimes, Taligent, Inc.
    Programming the Colossal

7:30–10:30pm Athematic Short Talks — Robert Wedig, Wedig Consulting, Chair
  • Mark Lacas, Lone Wolf
    Virtual Reality for Network Control
  • Julian Uschersohn, Hitachi Micro Systems Incorporated
    Chaos, Fuzzy, and Logical Paradoxes
  • David S.H. Rosenthal, Sun Microsystems
    What's Really Interesting About Plan 9
  • John Wakerly, Alantec
    Successful Hardware Design Without CAD
  • Dan Shapiro, Stanford University
    The Astronaut and the Banana Peel Revisited
  • Mike Cheponis, California Wireless
    The RF/Biology Connection: Should I Trash My Cellular Phone?
  • Pete Wilson, Groupe Bull
    Architectural Requirements of PDA-Style Products
  • Rick Parfitt, Apple Computer
    Speech Recognition: Is it Here Yet?
  • Tom Rolander, Novell, Incorporated
    Is There a Future to Heterogeneous Computing?
Thursday, April 29

8:30–10:00am  Hot New Micros — Michael Slater, *MicroDesign Resources*, Chair  
  • Mitch Alsup, *Ross Technology*  
     A Processor Which Will Never Be Built  
  • Ken Shoemaker, *Intel Corporation*  
     The Intel Pentium™ Microprocessor  
  • Keith Diefendorf, *Motorola*  
     The PowerPC Microprocessor

10:30–12:00n  Visual Media Formats and Standards — Brian Berg, *Berg Software Design*, Chair  
  • John Ciccarelli, *Adobe Systems*  
     Adobe Acrobat: Breaking Out of ASCII Jail  
  • Steve McGeady, *Intel Corporation*  
     Digital Video for Fun and Profit  
  • John Sell, *The 3DO Company*  
     3DO: A Real Multimedia Standard?

1:30–3:00pm  Pocket Widgets & Personal Electronics — Dewayne Hendricks, *Tetherless Access Ltd.*, Chair  
  • Chuck Berman, *EO Inc.*  
     Personal Communicators: Present Implications, Future Possibilities  
  • Jim Valerio, *Intel Corporation*  
     Pocket Gizmos from a Software Engineer’s Perspective  
  • Mark Cummings, *SRI International*  
     Applications for Personal Communicators and Pocket Gizmos

  • David Hayes, *Fenwick & West*  
     Look and Feel: The State of the Law  
  • Gary Reback, *Wilson, Sonsini, Goodrich & Rosati*  
     Reverse Engineering and Disassembly: The State of the Law  
  • Ronald Laurie, *Weil, Gotshal, and Manges*  
     Software Patents: The State of the Law  
  • Mark Radcliffe, *Ware & Freidenrich*  
     MultiMedia: Impacts and Implications of the Law

7:00–7:30pm  A Debate on the Future of Intel  
  • Michael Slater, *MicroDesign Resources*: A Scenario for Impending Decline  
  • Nick Tredennick, *Tredennick, Inc.*: A Scenario for Continuing Growth

7:30–11:00pm+  Open Discussion: A Rich Asilomar Tradition — Mary Eisenhart, *MicroTimes*, TimeMaster  
  (Contact Mary any time after registration to reserve a 10-minute time slot.)
Friday, April 30

7:30-8:30am Self-Guided Beachwalk  
[Attendance optional]

* Whitfield Diffie, *Sun Microsystems*  
  Cryptography and Public Policy  
* Philip Zimmermann, *Boulder Software Engineering*  
  The Politics and Technology of Pretty Good Privacy  
* John Gilmore, *Cygnus Support*  
  Cypherpunk Deployment of Cryptography

10:45-11:45am Cyberspace vs. the Real World — Jim Warren, *MicroTimes & Autodesk, Inc.*, Chair  
* Shari Steele, *The Electronic Frontier Foundation*  
  The Electronic Frontier as Seen from the Beltway  
  Update on Computers, Freedom & Privacy Issues

11:45am Conference Wrap-Up and Closing Remarks

12:00pm–1:30pm Outdoor Barbeque Lunch and Discussion (weather permitting...)

2:30–5:30pm Field Trip to the Monterey Bay Aquarium Marine Research Facility in Moss Landing — Ted Laliotis, *Hewlett-Packard*, Trip Coordinator  
(Space may be limited; contact Ted or sign up at or after registration. Participants are to provide their own transportation to Moss Landing, and will depart directly for home thereafter.)

Program Committee:

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| Brian Case | Bruce Koball | Nick Tredennick |
| Chuck Clanton | Ted Laliotis | John Wakerly |
| Fred Clegg | Stan Mazor | Jim Warren |
| Mary Eisenhart | Ken Shoemaker | Bob Wedig |
| Dewayne Hendricks | Michael Slater | John Wharton |
Wednesday, April 20

1:30–1:45pm  Opening Remarks — John Wharton, *Applications Research*, General Chair

1:45–3:15pm  Retrospective: The First Twenty Years — Fred Clegg, *Cirrus Aviation*, Chair
- The Birth of an Industry
  Stan Mazor, *Synopsys*
- Computer Gamesmanship
  Alan Alcorn, *Silicon Gaming*
- The Wonder Years
  Ted Laliotis, *Hewlett-Packard Labs*
- Microprocessor Software: They've Been Doing It Wrong All These Years!
  Matt Biewer, *Consultant*
- Capabilities and Other Virtual Mistakes
  Bernard Peuto, *Concord Consulting*

3:45–4:45pm  Prospective: Toward the Year 2000 — John Wharton, *Applications Research*
- Programmable Architectures, the LightBus, and Geoprocessors
  Vic Kley, *Giga Operations Corp.*
- Isotopes "R" Us: Manufacturing Artificial Transplutonic Elements

7:30–10:30pm  Athematic Short Talks — Robert Wedig, *Wedig Consulting*, Chair
- Stalking Artificial Life
  Rudy Rucker, *San Jose State University*
- Beyond MIDI
  Nick Nichols, *Probitas Corporation*
- Pentium Processor Performance Monitoring
  Bruce Ableidinger, *Microtek International*
- How Processing Speed Can Improve the User Interface
  Ron Avitzur, *Consultant*
- PowerPC: Behind the Scenes
  John Sell, *The 3DO Company*
- Marketing a Nonexistent Product
- Improving User Training with Multimedia
  Wendy Peikes, *Gain Technology*
- Computer-Assisted Government Access
  Jim Warren, *MicroTimes & BoardWatch*
- Crashing the Cube
  John Wharton, *Applications Research*
Thursday, April 21

8:30–10:00am Reconfigurable Logic — Nick Tredennick, *Altera Corp.*, Chair
- Programmable Logic: The Next Microarchitecture
  Nick Tredennick, *Altera Corp.*
- Reconfigurable Processors
  Craig Warner, *Ceram Inc.*
- How Document Understanding Will Affect System Usability
  Chuck Stormon, *Coherent Research, Inc.*

10:30–12:00 PowerPC or Bust! — Michael Slater, *MicroDesign Resources*, Chair
- Does PowerPC Matter?
  Michael Slater, *MicroDesign Resources*
- PowerPC Futures
  Keith Diefendorff, *Motorola*
- Moving the Mac OS to PowerPC
  Philip Koch, *Apple Computer*
- Has the Emperor Any Clothes? And Is His Underwear Clean?
  Pete Wilson, *Kiva Design*

1:30–3:00pm Rocket Science — Bruce Koball, *Motion West*, Chair
- Spooks in Space: Commercial Remote Sensing
  Robert G. Kennedy III, *House Subcommittee on Space*
- MPEG In Your Face: Direct Satellite Video Broadcasting
  Robert Sloan, *Compression Labs*
- Rolling Your Own Rockets
  Gary Hudson, *Hudson Engineering*

- Scalable Audio Compression and the Speed-of-Sound CD-ROM
  John Stautner, *Aware, Inc.*
- The Design and Development of a Cost-Effective Real-Time Object-Oriented Distributed-Processor Control System for Model Trains

7:00–7:30pm RATs From the Past — Mary Eisenhart, *MicroTimes*, Chair
- Stan Mazor: *Random Logic Replacement*
- Nick Tredennick: *Causes Of Midlife Identity Crisis*
- Pete Wilson: *Requiem for a Workstation*

7:30–11:00pm+ Open Discussion: A Rich Asilomar Tradition — Mary Eisenhart, *MicroTimes*, TimeMaster (Contact Mary after registration to request a 10-minute time slot to speak on any subject you wish. Slot assignments will be first-come-first-served.)
Friday, April 22

7:30–9:00am Self-Guided Beachwalk
   [Attendance optional]

9:30–11:30am Information Infrastructure — Dewayne Hendricks, Tetherless Access Ltd., Chair
   • Data Comm, Then and Now
     Sam Wood, Modern Systems Research
   • High-Speed Network Update
     David Newman, Alantec
   • Bay Area ATM Gigabit Testbeds
     Mark Laubach, Hewlett-Packard Labs
   • LEO Satellites and the Information Infrastructure
     Rex Buddenberg, Naval Postgraduate School
   • Implications of Cryptography
     Tim May, Cryptologic

11:30–11:45am Conference Wrap-Up and Closing Remarks

12:00–1:30pm Outdoor Barbeque Lunch (weather permitting...)

1:30–3:00pm Open Group Discussion (topics and format to be determined)

Program Committee:

Brian Berg       Marc Kaufman       Michael Slater
Brian Case      Bruce Koball       Fred Terman
Chuck Clanton   Cary Kornfeld     Nick Tredennick
Fred Clegg      Ted Laliotis      John Wakerly
Mary Eisenhart  Stan Mazor        Jim Warren
Dewayne Hendricks Marianne Mueller Bob Wedig
Ted Kaehler      Ken Shoemaker     John Wharton
Wednesday, April 19

1:30–1:40pm Opening Remarks — John Wharton, Applications Research, General Chair

1:40–3:15pm Home LANs: Device-Oriented Networking — Brian Berg, Berg Software Design, Chair
   • A Thousand Nodes of Light (and Sound) – John Chester, Consultant
   • Integrating Personal Entertainment, Communications, and Computing —
     Gary Hoffman, SkipStone, Inc.
   • Chip Design for Set Top Boxes – Frank Schwartz, Mainstream Control, Inc.
   • Actual Reality: Humanizing Technology – Mark Lacas, Lone Wolf

3:45–4:45pm Post-Industrial Robots — Mary Eisenhart, MicroTimes, Chair
   • Co-Opting Cold-War Technology
     Rob Kennedy, The Ultimax Group
   • Moore's Law in the Minefield
     John Walker, Megalon
   • De-Mining Robot Technology
     Jean-Daniel Nicoud, Swiss Federal Institute of Technology

7:30–10:00pm Athematic Short Talks — Robert Wedig, Wedig Consulting, Chair
   • Gaming as a Driver of Technology
     Al Alcorn, Silicon Gaming
   • iPower Semiconductor-Based Cryptographic Solutions for Electronic Security
     Gordon Force, National Semiconductor
   • PCMCIA Devices Using Reconfigurable Logic
     Mark Cummings, EnVia
   • Beyond HSM: You Can't Manage Gigabytes the Way You Manage Megabytes
     Tom Rolander, PG Soft
   • IrDA & Infrared Data Communications: All Heat and No Light?
     Mike Cheponis, California Microwave
   • The Computer History Association of California and What It's Trying to Do
     Kip Crosby, Computer History Association of California
   • Filmcraft and User Interface Design III
     Chuck Clanton, Aratar

10:15–11:30pm Wednesday Night at the Movies — John Wharton, Applications Research, Chair
   • Making the First All-Digital Production and Why
     Robert Miller, Pure Grain Digital Productions
   • Computer Graphics for Special Effects
     Eric Enderton, Industrial Light and Magic
Thursday, April 20

8:30–10:00am Microprocessors — Michael Slater, *MicroDesign Resources*, Chair

- Challenges for Superscalar x86 Execution
  Fred Weber, *NexGen*
- The K5: AMD's First Fully-Independent x86 Design
  Mike Johnson, *AMD*
- It's the Pipeline, Stupid
  Andy Glew, *Intel Corp.*
- A Hybrid Architectural Model to Exploit Instruction Level Parallelism
  Kevin Rudd, *Stanford University*

10:30–12:00 Device Technology and Design Tools — Bruce Koball, *Motion West*, Chair

- Behavioral Synthesis
  Charlie Smith, *Synopsys*
- Delay Effects in Deep Submicron Technology
  Clive (Max) Maxfield, *Intergraph Electronics*
- Next-Generation Packaging Technologies
  John Novitsky, *MicroModule Systems*

1:30–2:45pm The BB and the Beach Ball — Nick Tredennick, *Altera*, Chair

- Limits to CPU Performance
  Martin Reynolds, *DataQuest*
- Desktop Wars
  Keith Diefendorff, *Motorola*
- OS Wars
  Bob Cousins, *AIM Technology*


- What Do You Mean, Digitizing? What Do You Mean, Richness?
  Leonard Laub, *Vision Three*
- It Ain't Just Rocket Science
- A Menu is Not the Same as a Cookbook Which is Not the Same as a Meal — Experiences in Fine Arts Museums with Digital Technologies
  Steve Mayer, *San Francisco Museum of Modern Art*

7:00–7:30pm Remembering Gary — Bruce Koball, *Motion West*, Coordinator

7:30–11:00pm+ Open Discussion: A *Rich* Asilomar Tradition — Mary Eisenhart, *MicroTimes*, RAT Patrol (Contact Mary after registration to request a 10-minute time slot to speak on any subject you wish. Slot assignments will be first-come-first-served.)
Friday, April 21

7:00–8:00am Self-Guided Beachwalk
[Attendance optional]

9:00–11:30am Asilomar Comes of Age: Sex, Censorship, and Cyberspace — Jim Warren, Chuck Clanton, Cary Kornfeld, Marianne Mueller, Chairpeople

9:00am Facts and Issues
• Psychological, Sociological, and Medical Issues
  Chuck Clanton, Aratar
• Some Measures of Apparent Erotica in Cyberspace
  Marianne Mueller, Sun Microsystems
• Erotica Sells: A Survey of the Business (Multimedia and CD-ROM)
  Marie D'Amico, Attorney/Writer
• Legislative and Political Issues
  Jim Warren, GovAccess, MicroTimes, BoardWatch, etc.

10:10am Problems and Perspectives (Panel Discussion)
• Legal Problems for Computer-Based Adult Material Providers
  Jeffrey J. Douglas, Free Speech Coalition
• Old and New Law Enforcement Perspectives
  Frank Dudley Berry, Jr., Deputy D.A. of Santa Clara County
• Protecting Freedom of Expression on the Net
  Bobby Lilly, Californians Against Censorship Together
• Production Aspects of Adult Entertainment
  Nina Hartley, Free Speech Coalition

11:00am Technological Solutions (Moderated Discussion by Workshop Attendees)

11:30–11:45am Conference Wrap-Up and Closing Remarks

12:00–1:30pm Outdoor Barbecue Lunch (weather permitting...)

Program Committee:

Brian Berg  Marc Kaufman  Michael Slater
Brian Case  Bruce Koball  Fred Terman
Chuck Clanton  Cary Kornfeld  Nick Tredennick
Fred Clegg  Ted Laliotis  John Wakerly
Mary Eisenhart  Stan Mazor  Jim Warren
Dewayne Hendricks  Marianne Mueller  Bob Wedig
Ted Kaehler  A.J. (Nick) Nichols  John Wharton
Ken Shoemaker
Wednesday, April 17

1:30–1:45pm Opening Remarks — John Wharton, Applications Research, General Chair

1:45–2:45pm Media Processors — Cary Kornfeld, Kornfeld Design Labs, Chair
   • The Mpact Media Processor
     Steve Purcell, Chromatic Research
   • Multimedia: It's About I/O
     David S.H. Rosenthal, nVidia Corp.

3:15–5:00pm Wireless Technologies in the Post-Telecom-Act-of-'96 Era — Dewayne Hendricks, Warp Speed Imagineering, Chair
   • Frequency Spectrum Allocation Issues
     Bennett Kobb, New Signals Press Inc.
   • Terrestrial Communications Issues
     Mike Cheponis, California Wireless, Inc.
   • Extraterrestrial Communications Issues
     Rick Voreck, Space Systems/Loral
   • Technological End-Runs Around Hierarchies
     Dave Hughes, Old Colorado Communications

7:30–10:30pm Athematic Short Talks — Bob Wedig, Wedig Consulting, Chair
   • Current Trends in Hard Disk Technology
     John Levy, Quantum Corp.
   • Java from an Outsider's Perspective
     Mark Lentczner, Glyphic Technology
   • The Barbarians Are At the Gateway: Will Literature Survive the Web?
   • The Web: I Believe the Hype
     Marianne Mueller, JavaSoft, Sun Microsystems, Inc.
   • The Computer Museum History Center – I
     Len Shustek, Network General
   • The Computer Museum History Center – II
     Gordon Bell, Microsoft
   • "Telecom Pricing Is A Notorious Scam"
     David S.H. Rosenthal, Vitria Technologies
   • Hacking the Corporation
     Steve McGeady, Intel Corp.
Thursday, April 18

8:30–9:45am  **Bullets Over Broadband**  — Brian Berg, *Berg Software Design*, Chair
  • Copper Access and ATM as Basic Components of Full Service Networks
    Kim Maxwell, *Independent Editions*
  • Broadband to the Masses
    Ed Moura, *Hybrid Networks*

10:00–11:00am  **Northwestern Exposure**  — Bruce Koball, *Motion West*, Chair
  • Some Thoughts on Telework
    Gordon Bell, *Microsoft*
  • On Moving to Microsoft
    Jim Blinn, *Microsoft*

11:15–12:00pm  **Gutless PCs and the Servers that Love Them**  — Nick Nichols, *Probitas*, Moderator
  Panel Discussion and Open Debate
  • John K. Chester, *Consultant*
  • Steve McGeady, *Intel Corporation*

1:30–3:30pm  **Java Technology and Security**  — Marianne Mueller, *JavaSoft, Sun Microsystems, Inc.*, Chair
  • Overview & The Basis of Java Security
  • Why Java? –From a Techie Perspective
    Sami Shaio, *YAJSU*
  • Why Java? –From a Business Perspective
    Ruth Hennigar, *JavaSoft, Sun Microsystems, Inc.*
  • Programs Make Me Nervous
    Bill Cheswick, *Bell Laboratories, Lucent Technologies*

4:00–5:00pm  **To Infinity and Beyond!**  — Bruce Koball, *Motion West*, Producer
  • The Story Behind "Toy Story"
    Alvy Ray Smith, *Microsoft*

7:30–11:00pm+  **Open Discussion: A Rich Asilomar Tradition**  — Mary Eisenhart, *MicroTimes*, RAT Patrol
  (Contact Mary after registration to request a 10-minute time slot to speak on any subject you wish. Slot assignments are first-come-first-served.)
Friday, April 19

7:30-8:30am  Self-Guided Beachwalk
(Attendance optional)

9:30–11:30am The Future of µP Architecture — Ken Shoemaker, Intel Corp., Moderator

Part I: How I'd Spend 100M Transistors
• Mitch Alsup, Ross Technology
• Keith Diefendorff, AMD
• Andy Glew, Intel
• Bruce Lightner, Metaflow
• Jack Mills, Intel

Part II: Panel Discussion and Debate

11:30–11:45am Conference Wrap-Up and Closing Remarks

12:00–1:30pm Outdoor Barbecue Lunch and Discussion (weather permitting...)

Program Committee:

Brian Berg  Marc Kaufman  Ken Shoemaker
Brian Case  Bruce Koball     Fred Terman
Fred Clegg  Cary Kornfeld    John Wakerly
Mary Eisenhart  Ted Laliotis    Jim Warren
Lorri Everhart  Marianne Mueller  Bob Wedig
Dewayne Hendricks  A.J. (Nick) Nichols  John Wharton
The Twenty-Third Asilomar Microcomputer Workshop
April 16–18, 1997

Wednesday, April 16

1:30pm  **Opening Remarks** – John Wharton, *Applications Research*, General Chair

1:45pm  **Conquering Heroes?: Tales from the Front** – Nick Nichols, *Probitas Corporation*, Chair
  - Object Lessons from Taligent
    Jack Grimes, Visa International
  - Architecture of a Gaming Device
    Al Alcorn, *Consultant*
  - Cheap Access to Space
    Gary Hudson, *Hudson Engineering*
  - Architecture of a Forth-Based Internet Chip
    Chuck Moore, *The iTV Corporation*

3:15pm  **Break**

3:45pm  **Future Display Technology** – Brian A. Berg, *Berg Software Design*, Chair
  - Is Electronic Holography the Ultimate Display Technology?
    Pierre St. Hilaire, *Interval Research*
  - 3D Stereoscopic Display Technology
    Lowell Nobel, *QD Technology*
  - The NV Appliance
    Ted Laliotis, *Laliotis & Associates*

5:00pm  **Reception and Dinner**

7:30pm  **Athematic Short Talks** – Bob Wedig, *Wedig Consulting*, Chair
  - Computer Performance Democratization on Wall Street
    Jonathan Sandberg, *Morgan Stanley*
  - Ultra Computing and Potential Applications
    Martin Morf, *Stanford University*
  - Cable Modems: Facts and Fantasy
    Mark Laubach, *Com21, Inc.*
  - Going the Last Mile – The Real Issues

  - Breaking Out of the Sandbox
    Ken Schwartz, *Consultant*
  - Analog Logic and Verbal System Design
    Dave Wyland, *The Wyland Group*
  - Real Hypertext Publishing: What's the Web Missing and How Can We Fix It?
    Chris Peterson, *The Foresight Institute*
  - Information, Propaganda, and the Web
    Mark Hall, *ZD Labs*
  - Intelsat 708 Launch Failure
    Rick Voreck, *Space Systems Loral*
Thursday, April 17

8:00am **Electronic Commerce** – Ted Laliotis, *Laliotis & Associates*, Chair
   • Government Policy Issues and Internet Taxation  
     Ted Laliotis, *Laliotis & Associates*
   • Payment Systems  
     Jack Grimes, *Visa International*
   • Electronic Commerce Security Issues  
     Bill Cheswick, Bell Labs, *Lucent Technologies*

9:30am **Break**

10:00am **WebPlayers and Internet Appliances** – Marc Kaufman, *Adobe Systems*, Chair
   • Facts and Myths About PC/TV Convergence  
     Michael Gold, *SRI Consulting*
   • A Low-Cost Internet Access Device  
     Gary Langford, *The iTV Corporation*
   • WebTV Capabilities and Future Directions  
     Tim Park, *WebTV*
   • @Home Network Architecture: An Intelligent Perspective  
     Milo Medin, *@Home Network*

12:00n **Lunch**

1:30pm **On-Line Communities** – Brian A. Berg, *Berg Software Design*, Chair
   • The First Noble Truth of CyberSpace: People are People Even in the MUD  
     Diane Schiano, *Interval Research*
   • The Internet as a Populated Place  
     Pavel Curtis, *PlaceWare, Inc.*
   • On-Line Group Communication Media and Markets  
     Orca Starbuck, *OnLive! Technologies*

3:00pm **Break**

3:30pm **Java and Company (Presentations and Panel Discussion)** – Marianne Mueller, *Sun Microsystems/JavaSoft*, Moderator
   • Shipping Code on Shifting Sand: The PlaceWare Development War Story (So Far)  
     Pavel Curtis, *PlaceWare, Inc.*
   • Roaming on the Net  
     Hong Bui, *Roampage*
   • Experiences of Yet Another Java Startup  
     Sami Shaio, *Marimba*
   • Inferno and Limbo  
     Rob Pike, *Bell Labs*

5:00pm **Reception and Dinner**

7:00pm **Brushes with Greatness (Video Shorts)** – Bruce Koball, *Motion West*, Stage Manager

7:30pm **Open Discussion, A Rich Asilomar Tradition** – Mary Eisenhart, *MicroTimes*, RAT Patrol  
(Ten-minute presentations on any subject you choose. Contact Mary any time after registration to secure your time slot, first-come first-assigned.)
Friday, April 18

5:30am  Pre-Dawn Comet Watch  
(Attendance optional)

8:30am  Internet Infrastructure – Bob Wedig, Wedig Consulting, Chair
- Interpreting Internet Measurements  
  John Quarterman, MIDS
- Behind the Scenes of Running an ISP  
  Matthew Kaufman and Qarin Van Brink, Scruz-Net
- Modem Support for ISP Access: Speed and Reliability  
  Joe Decuir, Microsoft

10:00am Break

10:30am Microprocessor Panel Debate: If **I** Were Defining IA-64... – "Joe Intel", Moderator
- Mitch Alsup, Ross Technologies
- Keith Diefendorff, Apple Computer
- Mike Johnson, AMD
- Bruce Lightner, Metaflow  
  John Wharton, Applications Research

11:45am Conference Wrap-Up and Closing Remarks

12:00n Outdoor Barbecue Lunch (weather permitting)

1:15pm Self-Organizing Group Discussion
  What Sealed Apple's Fate? Will Microprocessor Performance Hit the Wall?  
  Profiting from the Year 2000 Software Problem; Dealing with the Death of  
  Moore's Law; etc.

2:30pm Conference Adjourns

Program Committee

Brian Berg          Marc Kaufman          A.J. "Nick" Nichols
Brian Case         Bruce Koball           Ken Shoemaker
Chuck Clanton      Cary Kornfeld         Fred Terman
Fred Clegg         Ted Laliotis           Nick Tredennick
Mary Eisenhart     Stan Mazor            Bob Wedig
Dewayne Hendricks  Marianne Mueller      John Wharton

NetSource/Scruz-Net: The Official ISP of the Asilomar Microcomputer Workshop
Wednesday, April 22

1:30pm Opening Remarks – Brian Berg, Berg Software Design, General Chair
Bob Wedig, Wedig Consulting, Program Chair

1:45pm Palm is My Pilot – Stan Mazor, BEA Systems, Chair
  • The Thoughts of a Recovering OS Addict
    Brian Dougherty, Wink Communications
  • More Fun Things to Do with a Palm Pilot
    Ian Goldberg, UC Berkeley
  • Java in Tight Spaces: Shoehorning to the Palm Pilot
    Richard Ross, TeleMedia Devices

3:15pm Break

3:30pm Tales from the Crypto – Marianne Mueller, Sun Microsystems/JavaSoft, Chair
  • Making Cryptography a Little Less Cryptic
    Marianne Mueller, Sun Microsystems/JavaSoft
  • Renting Your Soul to the Devil: How a Crypto Geek Became a Policy Geek and Back Again
    Matt Blaze, AT&T Labs-Research
  • Permissive Action Links
    Steve Bellovin, AT&T Labs-Research
  • Key Cracking and Cryptanalysis for Fun and Profit
    Ian Goldberg, UC Berkeley

5:15pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, Wedig Consulting, Chair
  • 1394 as a Multimedia Infrastructure, or The Demise of USB
    Gary Hoffman, Consultant
  • Technology Alternatives for Software Defined Radio
    Mark Cummings, enVia, Inc.
  • Designing Technomadic Systems
    Steve Roberts, Nomadic Research Labs

  • Mining and Extracting Maximum Value from Your IP Assets
    Irv Rappaport, SmartPatents, Inc.
  • Technology and Sociology
    Marty Graham, UC Berkeley
  • The Chip that Wouldn't Die
    John Wharton, Applications Research
  • The iButton with Java: A non-Card Java Card
    Don Loomis, Dallas Semiconductor
10:15pm  Asilomar Neo-Classic Movies – Marc Kaufman, Adobe, Chair
    • Inventors’ Hall of Fame
      Stan Mazor, BEA Systems
    • Mars Landing Video
      Mark Laubach, Com21, Inc.
    • Powers of Ten
      Pierluigi Zappacosta, Logitech
    • LEO: The Automatic Office
      Len Shustek, The Computer Museum History Center
    • The EDSAC Film
      Len Shustek, The Computer Museum History Center

Thursday, April 23

8:30am  Computers and Video: As Worlds Collide – John Wharton, Applications Research, Chair
    • Driving Visual Speech with Audio
      Malcolm Slaney, Interval Research
    • The Digital Darkroom: The Design of a Science Museum Exhibit
      Bill Cheswick, Lucent-Bell Labs
    • Mapping the Digital Boundaries of Art
      Erich Schienke, SF Computer Museum

10:00am  Break

10:15am  The EPIC Debate – Ken Shoemaker, Intel, Chair
    • Panelists
      Ken Shoemaker, Intel
      Mike Johnson, AMD
      Kevin Rudd, Stanford University
      Brian Case, Church of the Sub Optimal

12:00n  Lunch

1:30pm  Teeny Tiny Technology – Mary Eisenhart, MicroTimes
    • There’s Nothing Small about Nanotechnology
      Ralph Merkle, Xerox PARC
    • "Sounds Like Science Fiction": Applications of Digital Materials Processing
      Chris Peterson, Foresight Institute

2:30pm  Break

3:00pm  The Rise of Telecommunities – Mark Heyer, HeyerTech, Chair
    • Universal High Speed Internet Access - The Palo Alto RFP
      Mark Heyer, HeyerTech
    • The Neighborhood Fiber Network Proposal
      Michael Silverton, Fiberhood Networks
    • The Case for Wireless
      Dewayne Hendricks, Com21, Inc.
    • Cable Modems - High Speed Now
      Mark Heyer, HeyerTech
    • Open Debate

5:00pm  Reception and Dinner

7:15pm  A Day with Scott Adams (Video Presentation) - Tia O’Brien, SJMN Contributing Writer, Presenter
(Ten-minute presentations on any subject you choose. Contact Mary any time after registration to secure your time slot, first-come first-assigned.)

**Friday, April 24**

6:30am  Sunrise Beach Walk  
*(Attendance optional)*

8:30am  **Athematic Talks II** – Pierluigi Zappacosta, *Logitech*, Chair  
- CritSuite - Back Links to the Web  
  Ka-Ping Yee, *University of Waterloo*  
- Fingerprint Biometrics  
  Vance Bjorn, *Digital Persona*  
- FPGAs aren't Just Glue Logic Anymore  
  Philip Freidin, *Fliptronics*

10:00am  Break

10:15am  **Convergence or Collision?: Software, Silicon, the NET and the Law** – Jerry Klein, *The Chatham Group*, Chair  
- Overview  
  Jerry Klein, *The Chatham Group*  
- The Software Perspective  
  George Riley, *O'Melveny & Myers*  
- The Silicon Perspective  
  Richard Abramson, *Heller Ehrman White & McAuliffe*  
- The Net Perspective  
  Mark Radcliffe, *Gray Cary Ware & Freidenrich*

11:45am  Conference Wrap-Up and Closing Remarks

12:00n  Outdoor Barbecue Lunch (weather permitting)

1:15pm  **Self-Organizing Group Discussion**  
Has PC productivity caused economic deflation? What is your worst case Y2K scenario? What is the next paradigm shift? Can Intel and Microsoft survive it? What's the next question that we should be asking ourselves?

2:30pm  Conference Adjourns

Program Committee  

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<thead>
<tr>
<th>Brian Berg</th>
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*Internet Service coordinated by Matthew Kaufman and Qarin Van Brink of Tycho Networks*
Wednesday, April 21 (12/30/99 R.A.T.*)

1:30pm: Opening Remarks — Brian Berg, Berg Software Design, General Chair
        John Wharton, Applications Research, Program Chair

1:45pm: Bio/Tech Frontiers — Bob Cousins, Cousins Consulting, Chair
        • Jane C. Sargent, M.D., University of Massachusetts Medical Center:
          What Biotech Will Do To and For Medicine (and Y2K, etc.)
        • Larry O’Gorman, Veridicom, Inc.: Can Biometrics Obsolete Passwords,
          PINs and Door Keys, but Not Personal Privacy, Too?

3:15pm: Absolute Power — Mark Laubach, Com21, Inc., Chair
        • Suzanne Johnson, Independent: Selling Sunshine to PG&E: A True Tale of
          Power and Innocence in Silicon Valley
        • Amory Lovins, Rocky Mountain Institute: Hypercars™: Vehicles Worthy of
          the Information Age
        • Phil Karn, QualComm: Power to the People

4:45pm: Reception and Dinner

7:00pm: Athematic Short Talks — Bob Wedig, Wedig Consulting, Chair
        [Listed alphabetically; final speaking order to be determined]
        • Tamara Munzner, Stanford University: Interactive Navigation of Large Networks
        • David Schwartz, ImaginOn, Inc.: E-Commerce Using CD-based High Bandwidth Video
        • Jack Grimes, Consultant: Chip Cards: The Ultimate Thin Client
        • David Rosenthal, Stanford University Libraries: The Long-Term Preservation
          of Digital Journals
        • Warren Stringer, Muse Dot Com: Building a Web of a Trillion Human Gestures
        • Mike Cheponis, California Wireless: Rockin’ Writers and Radio-Free Asilomar
        • Dave Hampton, Sounds Amazing!: Is Success the Worst that Can Happen?
        • John Wharton, Applications Research: Taming El Palo Gonzo: Son et Lumiere sans Son

10:45pm: Wednesday Night at the Movies
        • Eric Enderton, Industrial Light and Magic: Special-Effects Graphics Revisited
        • [Additional videotape shorts to be determined]

(* R.A.T. = Reformed Asilomar Time)
Thursday, April 22 (12/31/99 R.A.T.)

8:15am:  Hardware Trends — Ken Shoemaker, Intel, Chair
• John Wharton, Applications Research: Microprocessor Philosophy Closes the Loop
• Earl Killian, Tensilica: How Extensible Processors Can Change System Design
• Ken Shoemaker, Intel Corp.: A Few More Bits About Merced

10:00am:  Open Source: Revenge of the Gnurds — Christine Peterson, Foresight Institute, Chair
• Brian Behlendorf, Apache Group: An Overview of the Open Source Development Model
• L. Peter Deutsch, Aladdin Enterprises: Open Software Licensing Beyond the OSD: Incenting a Diverse Developer Community
• Mark S. Miller, E Project: E: A Secure Distributed Programming Language for Writing Capability-Based Smart Contracts
• Open Source Strategy Panel: John Walker will join Chris, Brian, Peter, and Mark to discuss and debate – with each other and the audience – the future of Open Source, Linux, MP3, etc.

12:00pm:  Lunch

1:30pm:  Cyberparanoia — Marianne Mueller, Sun Microsystems, Chair
• Matthew Kaufman, Tycho Networks: The Pentium III Serialization Hysteria
• Ian Goldberg, UC Berkeley: Using the Internet Pseudonymously
• Bill Cheswick, Lucent-Bell Labs: Enemy of the State: How Close Are We?

3:30pm:  Toys “R” µS — Bruce R. Koball, Motion West, Chair
• Ron Milner, Applied Design Labs: The Toy Design Process: Are We at a Cusp?
• Dave Hampton, Sounds Amazing!: From Furball to Furby
• Allan Alcorn, Zowie Entertainment: Toymaking Challenges

5:00pm:  Reception and Dinner

7:00pm:  Off in the Ozone — John Wharton, Applications Research, Chair
• Gary Hudson, Rotary Rocket Company: Rotary Rocket Roton Progress Report

7:40pm:  Open Discussion: A Rich Asilomar Tradition — Mary Eisenhart, YOYOW, RAT Patrol
(Ten-minute presentations on any subject you choose. Contact Mary Eisenhart any time after registration to secure your time slot, first-come first-assigned.)

12:00m:  Virtual Y2K's Eve Party!!!
Friday, April 23 (1/1/00 R.A.T.)

8:30am: Consumer Networks — Bob Wedig, Wedig Consulting, Chair
• Sam Wood, Modern Systems Research, Inc.: IP Telephony: Paradigm Shift or Fad?
• Joe Decuir, Microsoft: A Home Networking Technologies Tour
• John McClain, Sun Microsystems, Inc.: The Jini™ Architecture: Changing the Rules of the Network

• Bill Cheswick
• Lee Felsenstein
• Stan Mazor
• Nick Tredennick
• John Walker

11:45am: Conference Wrap-Up and Closing Remarks

12:30pm: Outdoor Barbecue Lunch (weather permitting)

2:00pm: Conference Adjourns

Program Committee

Brian Berg  Bruce Koball  Fred Terman
Fred Clegg  Mark Laubach  Bob Wedig
Mary Eisenhart  Stan Mazor  John Wharton
Dewayne Hendricks  Marianne Mueller  Pierluigi Zappacosta
Ken Shoemaker
The Twenty-Sixth Asilomar Microcomputer Workshop
April 26 – 28, 2000

Wednesday, April 26

1:30pm Opening Remarks – Brian Berg, Berg Software Design, General Chair
      John Wharton, Applications Research, Program Chair

1:45pm Technology Vehicles: Land, Sea, Air, and Space – John Wharton, Chair
      • Java on Wheels
          Owen Densmore, Sun Microsystems
      • Performance Optimization in Modern Yacht Racing
          Stan Honey, Sportvision Inc.
      • Military Applications of Micro Air Vehicles
          Nick Tredennick, TechNerds International
      • Roton ATV Flight-Test Video
          Gary Hudson (in absentia), Rotary Rocket Company

3:00pm Break

3:30pm System Insecurity – Marianne Mueller, Sun Microsystems, Chair
      • Secrets
          Eugene Miya, NASA Ames Research Center
      • Restructuring DNS Around Social Principles
          Eric Hughes, Independent
      • How to Take the Internet Down for Several Days
          Bill Cheswick, Lucent Technologies

5:00pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, Wedig Consulting, Chair
      • The State of the Art in Internet Measurement
          kc claffy, UCSD-CAIDA
      • Wiring Tonga: From the Ground Up and the Sky Down
          Dewayne Hendricks, Dandin Group
      • Mi SETI@casa != Su SETI@casa
          Mark Laubach, Inconvenient Networks
      • Video Topology
          Tamara Munzner, Stanford University
      • How the Yellow First-Down Line Works
          Stan Honey, Sportvision Inc.
      • PowerTrip: Perspectives on PowerPC
          Pete Wilson, Motorola
      • Lessons of Antitrust: A Case Study
          Steve McGeady, Intel Corp.

10:30pm Wednesday Night Videos – Bruce Koball, Motion West, Veejay
Thursday, April 27

8:30am  New-Age Servers and Search Engines – Mark Laubach, Inconvenient Networks, Chair
        • Scaling Ultraseek Server from Small Sites to Medium-Sized Countries
          Walter Underwood, GO.com, The Walt Disney Company
        • Google System Architecture
          David desJardins, UC Berkeley and Google

9:45am  Break

10:15am Pocket-Sized Platforms – Bob Wedig, Wedig Consulting, Chair
        • Connecting the Physical World with the Virtual World of Computer Systems
          Roy Want, Xerox PARC
        • Itsy Pocket Computer
          Bill Hamburgen, Compaq Western Research Lab
        • The Matchbox PC
          Vaughn Pratt, Stanford University

11:45am Lunch

1:15pm  Metaprocessors and Software Deconstruction – John Wharton, Applications Research, Chair
        • HotSpot Technology
          David Stoutamire, Sun Java Software
        • VMware's Virtual x86 Platform.
          Mendel Rosenblum, VMware Inc.
        • The Transmeta Code Morphing Software System
          Dave Ditzel, Transmeta Corp.

2:45pm Break

3:15pm  Wireless Technology Update – Dewayne Hendricks, Dandin Group, Chair
        • Home Networks: A Case Study of a Dysfunctional Industry
          Debby Hindus, Interval Research
        • Mobile Telephony in Europe.
          Henri Slettenhaar, Swiss Silicon Valley Association
        • Will End-to-End Protocols Survive?
          Phil Karn, Qualcomm

4:40pm  A Debate on the Future of Bluetooth
        • For: Mike Cheponis, California Wireless
        • Against: Dewayne Hendricks, Dandin Group

5:00pm Reception and Dinner

7:15pm  Open Discussion: A Rich Asilomar Tradition – Mary Eisenhart, YOYOW, RAT Patrol
        (Ten-minute presentations on any subject you choose. Contact Mary Eisenhart any time after registration to secure your time slot, first-come first-assigned.)
Friday, April 28

5:30am  Pre-Dawn Viewing of Planetary Conjunction
        (Self-organized; attendance optional.)

8:00am  Eponymous Microprocessor Session – Ken Shoemaker, Intel Corp., Chair
        • Adventures in Silicon
          David Wyland, Cradle Technologies
        • Overview of the AMD K8 "Sledgehammer"
          John Sell, Advanced Micro Devices
        • Evolution in Architecture, from 21164 to the 21464
          Allan Baum, Compaq
        • Crusoe Processor Core Design Features
          Dave Ditzel, Transmeta Corp.

10:00am Break

10:30am Engineering for the Long Run – Brian Berg, Berg Software Design, Chair
        • Permanent Web Publishing
          David S.H. Rosenthal, Sun Microsystems
        • The Rosetta Disk Project
          Jim Mason, The Long Now Foundation

11:30am Conference Wrap-Up and Closing Remarks

12:00n Outdoor Barbecue Lunch (weather permitting...)

1:15pm  The Use of Technology to Enforce Responsible Behavior – David S.H. Rosenthal, Sun Microsystems, Moderator
        (Group and panel discussion involving selected Workshop attendees;
         details and panel composition to be announced.)

2:30pm Conference Adjourns

Program Committee

Brian Berg  Mark Laubach  Henri Slettenhaar
Fred Clegg  Stan Mazor  Fred Terman
Mary Eisenhart  Marianne Mueller  Bob Wedig
Dewayne Hendricks  David S.H. Rosenthal  John Wharton
Bruce Koball  Ken Shoemaker  Pierluigi Zappacosta
Wednesday, April 25

1:30pm Opening Remarks – Mark Laubach, Inconvenient Networks, General Chair
John Wharton, Applications Research, Program Chair

1:45pm Space Odysseys – John Wharton, Applications Research, Chair
  • Rotary Rocket: The Last Revolution
    Gary Hudson, HMX Inc.
  • Space-Based Global De-Warming –or– Anti-Venuforming Terra
    Robert Kennedy, The Ultimax Group
  • Running Mir to Ground
    John Wharton, Applications Research

3:00pm Break

3:30pm Extreme Engineering – Stan Mazor, Numerical Technologies Inc., Chair
  • Pogoing Palm Bots
    Illah Nourbakhsh, Carnegie –Mellon University
  • On-Chip Turbans and Pumps –or– MEMS Are Made of This
    Nick Tredennick, Gilder Publishing
  • Squeezing a Ton of Chickens in a Half-Ton Truck –or– How Was That Masked, Man? – Stan Mazor, Numerical Technologies Inc.

5:00pm Reception and Dinner

7:30pm Athematic Short Talks Part I – Bob Wedig, Wedig Consulting, Time Keeper
  • The Permanent Email Server Initiative
    Kurt Bollacker, Long Now Foundation
  • Data Immortality: How to Save Everybody's Data Forever for Almost Nothing. Memory is Free, Eternally! – John Walker, Fourmilab
  • From My Living Room to Intel in 24 Years
    Bert Forbes, Intel Corp. – Retired
  • Seeing the Fourth Dimension
    Rudy Rucker, San Jose State University

8:45pm Break and Space Station Fly-Over (details in note below committee list on page 3)

9:15pm Athematic Short Talks Part II – Bob Wedig, Wedig Consulting, Time Keeper
  • Putting the Squeeze on Web Bandwidth Costs
    Lu Abel, dotRocket
  • Bringing Socially Beneficial Technology into the Service of Humanity
    Jim Fruchterman, The Benetech Initiative
  • Defending the Public Interest: The UnFair Use of Standards
    Shari Steele, Electronic Frontier Foundation
Wednesday, April 25 (cont.)

10:15pm  Wednesday Night at the Movies: 2001: A Space Odyssey – Bruce Koball, MotionWest, Projectionist

Thursday, April 26

8:00am:  High Tech Art – Brian Berg, Berg Software Design, Arts Supporter
  • Applying Artificial Life: Computers as Collaborating Artists
    Aaron Wolf Baum, Algorithmic Artist
  • G-7 Stock Puppets
    William Pietri, Bianca/Scissor; and Jim Mason, Long Now Foundation
  • Internet Visualizations: '1:1' and 'Mapping the Web Infome'
    Lisa Jevbratt, San Jose State University/C5

9:45pm  Break

10:15am  How to Fix an Internet Election – Marianne Mueller, Sun Microsystems, Chad Counter
  • Why Computers Shouldn't Count Votes
    Rebecca Mercuri, Notable Software, Inc.
  • Problems with Internet Voting in Public Elections: David Jefferson, Compaq Systems Research Center; also with the California Task Force on Internet Voting
  • Voting is an End-to-End System Problem!
    Peter Neumann, SRI International Computer Science Lab

12:00n  Lunch

1:30pm  20,000,000 Transistors Under the Sea – Bruce Koball, MotionWest, Skipper
  • The Northern Elephant Seal: Back from the Brink
    Guy Oliver, The Oceanic Society
  • Instrumentation of Deep-Diving Marine Mammals
    Brent Wright, Independent Consultant:
  • The Environmental Sample Processor (ESP): An Embedded System for Remote Detection of Microorganisms in the Environment
    Chris Scholin, MBARI (Monterey Bay Aquarium Research Institute)

3:00pm  Break

3:30pm  Graphics and Visualization – Tamara Munzner, Compaq SRC, Alpha Sprite
  • VNOS, a Visual Network Operating System
    Mark Lacas, Lone Wolf Technologies
  • DVI and Lightning-2: Letting Graphics Out of the Box
    Gordon Stoll, Intel Corp.
  • The Digital Michelangelo Project
    Marc Levoy, Stanford University

5:00pm  Reception and Dinner

7:15pm  Open Discussion: A Rich Asilomar Tradition: Mary Eisenhart, YOYOW, RAT Patrol
(Ten-minute presentations on any subject you choose. Contact Mary Eisenhart any time after registration to secure your time slot, first-come first-assigned.)
Friday, April 27

8:15am  **Eponymous Microprocessor Session** – Ken Shoemaker, *Intel Corp.*, Chair
  - Why the Itanium Processor Architecture is the Greatest Thing Since Sliced Bread
    Kevin Rudd, *Intel Corp.*
  - The Piranha Eight-Way CMP Processor Architecture
    Luiz André Barroso, *Compaq WRL*

9:30pm  Break

10:00am  **Where Eagles Dare: Spectrum Policy & Wireless Technology in Indian Country** –
  Dewayne Hendricks, *Dandin Group*, Chair
  - Cultural Issues
    Steve Dupuis, *Salish Kootenai College*
  - Legal Issues
    Lawrence Lessig, *Stanford Law School*
  - Technology Issues
    Dewayne Hendricks, *Dandin Group*

11:30am  Closing Remarks

12:00n  **Outdoor Barbecue Lunch** (weather permitting)

1:15pm  **Panel Session: Where Did HAL Go Wrong?**
  (Group discussion involving selected Workshop attendees; details and panel composition to be announced)

2:30pm  Conference Adjourns

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**Program Committee**

Brian Berg    Mark Laubach    Ken Shoemaker
Fred Clegg    Stan Mazor    Fred Terman
Mary Eisenhart Marianne Mueller    Bob Wedig
Dewayne Hendricks Tamara Munzner    John Wharton
Bruce Koball    David S.H. Rosenthal    Pierluigi Zappacosta

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Note on Space Shuttle/ISS Fly-Over: Weather permitting, Space Shuttle Endeavour and the International Space Station should be visible briefly (one minute or less) at 9:07pm on Wednesday, April 25. Look to the due south-west, approx. 10° above the horizon. Information on optimal viewing sites will be provided Wednesday evening.
Wednesday, April 24

1:30pm Opening Remarks – Mary Eisenhart, *YOYOW*, General Chair
       John Wharton, *Applications Research*, Program Chair

1:45pm Digital Rights and Abuses – Dewayne Hendricks, *Dandin Group*, Chair
       • The Digital Rights Management Dark Age
         Seth David Schoen, *EFF*
       • Perspectives on the Napster Litigation
       • Are the Tools the Rules? The Future of the Digital Commons
         Dewayne Hendricks, *Dandin Group*

3:10pm Break

3:30pm Broadband for the Last Mile – Brian Berg, *Berg Software Design*, Chair
       • The Bandwidth Imperative: Why We Need It, How We Can Get It
         Mark Heyer, *HeyerTech*
       • Is Fiber Optics the Broadband Solution for the Home and SOHO?
         Bob Stillman, *RAS Consulting*
       • There’s Lots of Effective Bandwidth Available If You Know How to Use It
         Gene Kan, *Sun Microsystems*

5:00pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, *Wedig Consulting*, Time Keeper
       • Observations from the Beginnings of the Internet
         Dave Walden, *Internet Pioneer*
       • Better Living Through Fiber
         David S.H. Rosenthal, *Sun Microsystems Labs*
       • GNU Radio: A Free-Software Defined Radio
         Eric Blossom, *Blossom Research*
       • Movers and Shakers in Artificial Muscle Technology
         Robert Horst, *HT Consulting*
       • The Budapest Manifesto
         Vicky Reich, *Stanford University Libraries*
       • Digital Rights
         Gene Kan, *Sun Microsystems*
       • Actual Interfaces
         Tom Jennings, *World Power Systems*
       • Byzantium 550AD
         Paulina Borsook

11:00pm Wednesday Night at the Movies – Bruce Koball, *MotionWest*, Projectionist
Thursday, April 25

8:15am  **Eponymous Microprocessor Session** – Ken Shoemaker, *Intel Corp.*, Chair
- The Death of Scalability
  Mitch Alsup, *AMD*
- Computer Architecture 2000–2025: A Retrospective
  Andy Glew, *Intel Corp.*
- Dealing with the Soaring Challenges of Lithography Masks

10:00am  Break

10:30am  **Growing the Global Village** – Michelle Aden, *Sun Microsystems*, Chair
- Packets from Across the Digital Divide
  Jon Katz, *Cornell University*
- Metadata Standards: A Foundation for Future Ecological Asset Value
  Bill Coleman, *Electric Power Research Institute*
- Energy Sources for High-Performance Electric Vehicles

12:00n  Lunch

1:30pm  **Sensors: Low-Cost, High-Impact** – Tamara Munzner, *Compaq Systems Research Center*, Chair
- Ultrasonic Detection of Broken Rail
  Ken Schwartz, *Bay Area Rapid Transit R&D*
- Sensors and Networks at Home
  Bill Cheswick, *Lumeta Corp.*
- Vision for the Robotic Masses
  Illah Nourbakhsh, *The Robotics Institute, Carnegie-Mellon University*
- Slamming Pressure Sensors into Mars
  Kurth Reynolds, *Synaptics*

3:15pm  Break

3:45pm  **Managing Technologists, Herding Cats** – Stan Mazor, *Numerical Technologies, Inc.*, Chair
- Managing Creativity: The Development of Technical Individuals and Teams
  Dave Walden
- Management Credibility: What Technologists Need vs. What They're Getting
  John V. Levy, *John Levy Consulting, LLC*

5:00pm  Reception and Dinner

7:30pm  **Open Discussion: A Rich Asilomar Tradition**: Mary Eisenhart, *YOYOW*, RAT Patrol
(Ten-minute presentations on any subject you choose. Contact Mary Eisenhart any time after registration to secure your time slot, first-come first-assigned.)
Friday, April 26

5:30am Pre-Dawn Comet Watch
(Self-organized; attendance optional.)

8:15am Homeland Insecurity – Pierluigi Zappacosta, Digital Persona non-grata, Chair
  • Biometrics Applications, System Design, and Performance Evaluation
    Salil Prabhakar, Digital Persona
  • Biometrics Testing and Standards
    Jim Wayman, San Jose State University
  • We Know Where You Are: 3D Visual Person Tracking
    John Woodfill, Tyzx, Inc.

10:00am Break

10:30am H-P Wars, High-Tech Mergers, and other Board Room Shenanigans – Ted Laliotis, Laliotis & Associates, Moderator
  Panel session (remarks followed by discussion). Panelists to include:
  • Ted Laliotis, Laliotis & Associates
  • Jason Pontin, The Red Herring
  • Regis McKenna, The McKenna Group

11:45am Conference Wrap-Up and Closing Remarks

12:15pm Outdoor Barbecue Lunch (weather permitting)

2:00pm Conference Adjourns

Program Committee
Michelle Aden  Bruce Koball  Ken Shoemaker
Brian A. Berg   Stan Mazor    Fred Terman
Fred Clegg   Tamara Munzner    Bob Wedig
Mary Eisenhart   Tim Pozar     John Wharton
Dewayne Hendricks   David S.H. Rosenthal   Pierluigi Zappacosta

Additional thanks to Mike Cheponis for arranging Radio KaFKA; to Janet Guns for administrative support; and to Ted Laliotis for organizing and moderating the Friday-morning panel discussion.

Note to sidewalk stargazers: Weather permitting, this year brings two astronomical phenomena of note. A rare quintuple planetary conjunction will be visible Wednesday and Thursday evenings, with Mercury low in the western sky at twilight, and Venus, Mars, Saturn, and Jupiter forming a line arcing to the south. Also, Comet Ikeya-Zhang may be visible in the hours before dawn Thursday and Friday mornings. Look to the north, between the constellations Cygnus and Cassiopeia.
Wednesday, April 23

1:30pm Opening Remarks – Mary Eisenhart, YOYOW, General Chair  
John Wharton, Applications Research, Program Chair

1:45pm RFID: Overview, Technology, and Use – Owen Densmore, ComplexityWorkshop, Chair
   • RFID Overview  
     Owen Densmore, ComplexityWorkshop
   • RFID Technology  
     Stephen Smith, U.C. Berkeley and Alien Technologies
   • RFID Consumer Applications  
     Robert Sloan, Syngenesis

3:00pm Break

3:30pm Wireless in the Tall and Uncut – Dewayne Hendricks, Dandin Group, Chair
   • So What's the FCC Done to Us Lately?  
     Dewayne Hendricks, Dandin Group
   • The Pedal-Powered Internet  
     Lee Felsenstein, Golemics, Inc.
   • Wireless in Remote Areas  
     Dave Hughes, Old Colorado City Communications

5:00pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, Wedig Consulting, Time Keeper
   • BARWN: An Experiment in MAN Deployment of Licensed Exempt Radios for Multiple Use – Tim Pozar, Bay Area Research Wireless Network
   • An Idiosyncratic Introduction to Bioinformatics  
     Howard Cohen, Cohen Software Consulting, Inc.
   • ADAM: A Decentralized Abstract Machine  
     Andrew "Bunnie" Huang, Xenatera Partners
   • The Politics of Spam  
     Gary Kremen, Grant Media LLC
   • Introducing a Patented Client/Server, Java-based, Interactive, Competitive Knowledge Game on the Web – Pete Antoniak, EdUGames
   • Simulating Real Intranets with Honeyd  
     Bill Cheswick, Lumeta
   • Building an Intelligent Home with VNOS  
     Ophir Ronen, Singlestep Technologies
   • What if Bugs in Your Software Could Result in Torture and Killing?  
     Tom Rolander, Benetech

10:30pm Wednesday Night Videos – Bruce Koball, Motion West, VeeJay
Thursday, April 24

8:00am Free Access to Literature – Brian Berg, Berg Software Design, Chair
   • What is Open Access?
     Peter Suber, Earlham College
   • Open Access: Unlocking the Value of Research
     Rick Johnson, The Scholarly Publishing & Academic Resources Coalition
   • What is a Library Anymore, Anyway?
     Vicky Reich, Stanford University
   • The Internet Bookmobile
     Ashley Rindsberg, Internet Archive

10:00am Break

10:30am Network Security: Are We Prepared for Today’s Realities? – Michelle Aden, Sun Microsystems, Chair
   • Curious Yellow: The First Coordinated Worm Design
     Brandon Wiley, The Foundation for Decentralized Research
   • Linux FreeS/WAN: Open Source Security for the Rest of Us
     Hugh Daniel, The FreeS/WAN Project
   • Cybersecurity in the New World Order
     Rebecca Bace, Trident Capital

12:00n Lunch

1:30pm Separating the Spam from the Eggs and Bacon – Bob Wedig, Wedig Consulting, Chair
   • Habeas: Trespassers Will be Prosecuted
     Anne Mitchell, Habeas.Com
   • Next Generation Spam Fighting Techniques
     Karl Jacob, Cloudmark
   • Five Hundred Billion Scanned: Designing a Large-Scale Anti-Spam Filter
     Art Medler, Brightmail

3:00pm Break

3:30pm Future Shock: The Changing Shape of Things to Come – Tim Pozar, Late Night Software, Chair
   • The Future of the Past: The Real History of Moore's Law
     John Markoff, The New York Times
   • The Future Sucks: Innovation and Conformity in a Microsoft World
     Douglas Crockford, Faceless Corporation
   • Utopia Appropriated: The Future as it Never Was
     Rick Prelinger, The Prelinger Archives

5:00pm Reception and Dinner

7:30pm Open Discussion: A Rich Asilomar Tradition – Mary Eisenhart, YOYOW, RAT Patrol
   (Ten-minute presentations on any subject you choose. Contact Mary Eisenhart any time after registration to secure your time slot, first-come first-assigned.)
Friday, April 25

5:30am  Pre-Dawn Beach Walk
(Self-organized; attendance optional.)

8:00am  Making the Most of Modern Microprocessors – Ken Shoemaker, Intel Corp., Chair
• Feedback-Directed Optimization Strategies for Open-Source Compilers and Software Development – Robert Myers, Rustuck.Com
• Design and Experience: Using the Intel Itanium 2 Processor Performance Monitoring Unit to Implement Feedback Optimizations
  Kevin Rudd, Intel Corp.
• Tales of Optimizing Algorithms for Modern Microprocessors
  Terje Mathisen, Hydro
• Modern Graphic Processor Architectures
  Steve Purcell, nVidia

10:00am  Break

10:30am  Panel discussion: "It's Hard to Make Predictions — Especially About the Future" –
          Tim Pozar, Late Night Software, Chair
Panel moderated by:
• John Markoff, The New York Times
Panel members to include:
• Douglas Crockford, Faceless Corporation
• Rick Prelinger, The Prelinger Archives
• Paul Saffo, Institute for the Future

11:45am  Conference Wrap-Up and Closing Remarks

12:15pm  Outdoor Barbecue Lunch (weather permitting)

2:00pm  Conference Adjourns

Program Committee
Michelle Aden  Dewayne Hendricks  Ken Shoemaker
Brian A. Berg  Bruce Koball  Fred Terman
Fred Clegg  Stan Mazor  Bob Wedig
Mary Eisenhart  Tim Pozar  John Wharton
Janet Guns  David S.H. Rosenthal  Pierluigi Zappacosta

Additional thanks to Mike Cheponis for providing back-up hardware support for Radio Baghdad; to Janet Guns for administrative assistance; to Owen Densmore for arranging the opening session; to John Markoff for arranging and moderating the panel discussion; and to Walter Colon for jumping through hoops to arrange the high-speed internet link.
The Thirtieth Asilomar Microcomputer Workshop
April 28 - 30, 2004

Wednesday, April 28
1:30pm Opening Remarks – Mary Eisenhart, Y0Y0W, General Chair

1:45 pm Virtual Communities – Mary Eisenhart, Y0Y0W, Chair
  • Hunting Cool: The relationship of community to what's "cool" in computer-mediated communication
    Matthew McClure, Pinnacle Systems
  • The FreeBSD Operating-System Community: A self-organizing open source project
    Kirk McKusick, FreeBSD
  • The Network Is the Game: Social trends in mobile communities
    A.J. Kim, SocialDesigner.net

2:45pm Break

3:15pm Inspiring (and Funding) Innovation — Dewayne Hendricks, Dandin Group, Chair
  • Angel Investing
  • What's Getting Funded - and Why
    Dave Newman, Charles River Ventures
  • Very Ambitious Projects
    Christine Peterson, Foresight Institute
  • The DARPA Grand Challenge
    John Nagle, Team Overbot

5:00pm Reception and Dinner

7:30pm What Were We Thinking? The Founders Speak
  • Fred Clegg, San Jose State University
  • Fred Coury, Retired
  • Ted Laliotis, Laliotis & Associates
  • Fred Terman, Naval Postgraduate School

8:30 pm Break
8:45 pm **Athematic Short Talks** – Bob Wedig, Wedig Consulting, Time Keeper

- Scalable Visual Comparison of Biological Trees and Sequences
  Tamara Munzner, UBC Department of Computer Science
- Software Synthesis for Embedded Systems
  Bob Zeidman, Zeidman Technologies
- Five Ways to Ruin a Development Project
  John Levy, John Levy Consulting
- The California Recall — What the election data really showed
  Rebecca Mercuri, Kennedy School of Government, Harvard University
- SpamNet - Social democracy vs. spam
  Vipul Ved Prakash, Cloudmark, Inc.
- The Early Days
  Stan Mazor, Retired

11:00 pm **Wednesday Night Videos** – Bruce Koball, Motion West, Veeljay

Thursday, April 28

8:30 **Portable Technology: How It Has Changed Society, Influenced Culture, and Redefined the Workplace** – Anne P. Mitchell, Esq., Institute for Spam and Internet Public Policy, Chair

- Portable Technology: The good thing is, everything's always with you. The bad thing is, everything's always with you
  Dori Smith, Author, Mac OS X Unwired: A Guide for Home, Office, and the Road
- Where's Dolly Parton When You Need Her? The death of 9-5
  Frederick Lane III, SexBizLaw.com
- Inviting James Bond Into Your Office: Coping with the gadgets from Q's lab that seem to be everywhere
  David Shier, Shier Systems and Software

10:00am Break

10:20 am **Preserving the Past, Passing the Torch** – Michelle Aden, Sun Microsystems, Chair

- Science Museum Exhibits – My attempt to make a Nobel Prize winner
  Bill Cheswick, Lumeta
- MyLifeBits
  Gordon Bell, Microsoft Bay Area Research Center
- Software Collection Project at the Computer History Museum
  Bernard Peuto, Concord Consulting

12:00 noon Lunch
1:30pm **Run-DMCA: Raising Hell** – Brian Berg, Berg Software Design, Chair
   • DMCA: Tougher Than Leather
     Zack Higgins, Morrison & Foerster
   • What Are the Merits of the DMCA?
     Scott Frewing, Baker & McKenzie
   • Why All Engineers Should Be Afraid of the DMCA
     Korbin Van Dyke, PatentVentures

3:00pm Break

3:20pm **Blasts From the Past** – Brian Berg, Berg Software Design, Chair
   • Memory Is Free
     Jack Grimes, Consultant
   • Battlebots
     Philip Freidin, Fliptronics
   • Gary Went Flying
     Tom Rolander, ExtraCap, Inc.
   • The Birth of Furby
     Dave Hampton, Sounds Amazing!

5:00pm Reception and Dinner

7:30pm **Open Discussion: A Rich Asilomar Tradition** – Mary Eisenhart, Y O Y O W, RAT Patrol
   (Ten-minute presentations on any subject you choose. Contact Mary Eisenhart any time after registration to secure your time slot, first-come first-assigned.)

Friday, April 30

5:30am **Pre-Dawn Beach Walk**
(Self-organized; attendance optional)

8:30am **Motes, Microprocessors and Beyond** – Ken Shoemaker, Intel Corp., Chair
   • Intel Mote and Sensor Networks
     Ralph Kling, Intel
   • The "Design Gap": How we're in danger of succeeding our way over a cliff
     Simon Young, Nassda
   • The Ubiquitous Dust Motes: Wireless sensor networks for the masses
     Mike Cheponis, California Wireless

10:00am Break
10:20 am Quick Takes: Asilomar's Impact on Past Attendees - Panel Discussion —
Brian Berg, Berg Software Design, Chair
- Asilomar Keeps Popping Up!
  Owen and Dede Densmore, Complexity Workshop
- Exploiting the AMW Network to Build Your Startup Team
  Richard Ross, Berkeley TeleMedia
- Heading Deep into the Heart of Silicon Valley
  Debby Hindus, Rapport, Inc.
- Asilomar Changed My Life, or It's All Your Fault
  Brian Kelly, BKMS
- It's Not Only What You Know, It's Who You Know Who Knows You
  Mike Cheponis, California Wireless

11:20am It's Payback Time
Nick Nichols, Probitas Corporation

11:40am Wrap-Up and Closing Remarks

12:15pm Outdoor Barbecue Lunch (weather permitting)

2:00pm Conference Adjourns

Program Committee

Michelle Aden  Bruce Koball  David S. H. Rosenthal
Brian A. Berg  Stan Mazor  Ken Shoemaker
Fred Clegg  Anne P. Mitchell  Fred Terman
Mary Eisenhart  Tamara Munzner  Bob Wedig
Janet Guns  Tim Pozar  John Wharton
Dewayne Hendricks  Pierluigi Zappacosta

The program committee would especially like to thank Mike Cheponis and Dave Hampton for their contributions to this year's Workshop.
The Thirty-First Asilomar Microcomputer Workshop
April 20 – 22, 2005
(Motto: Never Trust a Computer Workshop Over 30!)

Wednesday, April 20

1:30pm Opening Remarks – Mary Eisenhart, YOYW, General Chair
John Wharton, Applications Research, Program Chair

1:45pm RFID Risks – Marianne Mueller, Stanford University, Chair
• RFID Applications Overview and Update
  Marianne Mueller, Stanford University
• Cracking RFID Security
  Steve Bono, Johns Hopkins University
• RFID From the Washington Perspective
  William Lane, FCC, Office of Engineering and Technology

3:00pm Break

3:30pm The Machinery of Electronic Voting – Michelle Aden, Sun Microsystems, Chair
• Pushing Forward: Voting System Standards
  Rebecca Mercuri, Harvard University
• Voting the Voters Can Trust
  Karl Auerbach, InterWorking Labs
• Electronic Voting Challenges … and the State of Fear
  Neil McClure, Hart InterCivic, Inc.

5:00pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, Wedig Consulting, Time Keeper
• Making Interval Arithmetic Fast Yet Cheap
  Nicholas Wilt, NVIDIA
• Steerable, Progressive Multidimensional Scaling
  Tamara Munzner, University of British Columbia
• Intelligently Speaking
  Dave Hampton, Sounds Amazing!
• Roam Home to a Dome: Bucky Fuller in Carbondale
  Dewayne Hendricks, Dandin Group
• Moore’s Wall
  Nick Tredennick, Noted Industry Contrarian
• End-to-End, Again: The Fall and Rise of “P2P”
  Matthew Kaufman, amicima
• What Really Happened Between Hollywood and ReplayTV?
  Andrew Wolfe, Wolfe Consulting
• Internet Telephony and the Confrontation with Regulation
  Rob Dorfman, EarthLink

11:00pm Munchies and Late Night Videos! – Bruce Koball, MotionWest, VeeJay
Thursday, April 21

8:15am Microprocessors ... and Moore! – Ken Shoemaker, Intel Corporation, Chair
   • 3-D Wafer Stacking
     Ken Shoemaker, Intel Corporation
   • The Cell Processor: Outside the Membrane Looking In
     Bob Wedig, Wedig Consulting
   • The Niagara CPU
     Allan Strong, Sun Microsystems
   • Full-Function Miniature Computers
     Craig Hughes, Gumstix

10:15am Break

10:45am Adventures in the Blogosphere – Mary Eisenhart, YOYOW, Chair
   • Blogs, Feeds & Podcasting: Distributed Media Of, By, and For the People!
     Eric Case, Google, Inc.
   • Mike’s Manic Minutes
     Michael Lehman, Microsoft Corporation

11:45am Lunch

1:30pm New Horizons in Media Distribution – Tim Pozar, Late Night Software, Chair
   • The New Economics of Content Distribution
     Tim Pozar, Late Night Software
   • Accessing Broadcast Archives
     Jeff Ubois, UC Berkeley
   • MythTV: Building a Home HDTV PVR
     Bill Cheswick, Lumeta Corporation

3:00pm Break

3:30pm PCs Gone Wild! – Anne Mitchell, ISIPP, Chair
   • The Missing No-Tech Spam-Fighting Component
     Danny Goodman, Author
   • Project Honeypot: A Distributed Web-Hosted Spider Trap
     Matthew Prince, Unspam Technologies Inc.

Ain’t Nothing Like the Real Thing: Email Authentication – Panel Discussion
   • Anne Mitchell, ISIPP, Moderator
Panel members to include:
   • Eric P. Allman, Sendmail, Inc.
   • Dave Rossetti, Cisco Systems Inc.
   • Meng Wong, SPF, EarthLink

5:00pm Reception and Dinner

7:20pm Innovators, Past and Future – Harold Evans, Author and Historian, Speaker

8:00pm Open Discussion: A Rich Asilomar Tradition – Mary Eisenhart, YOYOW, RAT Patrol
   (Ten-minute presentations on any subject you choose. Contact Mary Eisenhart as soon as practical after registration to secure your time slot, first-come first-assigned.)
Friday, April 22

5:30am  Pre-Dawn Snipe Hunt
(Self-organized; attendance optional. Try not to step on the nests.)

8:00am  “Every Place an Electron Spins, the FCC Regulates”: Governmental Roles in Regulating Technology – Dewayne Hendricks, Dandin Group, Chair
• FCC: A View from Six Years As A Technical Advisor
  Dewayne Hendricks, FCC Technological Advisory Council
• FCC: An Inside View
  William Lane, FCC, Office of Engineering and Technology
• Freedom to Connect
  David Isenberg, isen.com
• Regulated Standards Considered Harmful
  Brad Templeton, Electronic Frontier Foundation

10:00am  Break

10:20am  Barriers to Innovation – Panel and Open Group Discussion
• Nick Tredennick, Gilder Technology Report, Moderator
  Panel members to include:
  • Bill Cheswick, Lumeta Corp.
  • Rob Dorfman, EarthLink
  • Wendy Seltzer, EFF -and- Berkman Center for Internet & Society
  (Additional panel members to be announced)

11:45am  Closing Remarks – Mary Eisenhart, YOYOW, General Chair

12:15pm  Outdoor Barbecue Lunch (weather permitting)

1:45pm  Conference Adjourns

Program Committee
Michelle Aden  Dewayne Hendricks  David S.H. Rosenthal
Brian A. Berg  Bruce Koball  Ken Shoemaker
Bill Cheswick  Stan Mazor  Fred Terman
Fred Clegg  Anne Mitchell  Bob Wedig
Mary Eisenhart  Marianne Mueller  John Wharton
Janet Guns  Tamara Munzner  Pierluigi Zappacosta
Tim Pozar

The Program Committee would especially like to thank Janet Guns for her great assistance and tremendous patience in helping coordinate this year’s Workshop.
The Thirty-Second Asilomar Microcomputer Workshop
April 19–21, 2006

(Motto: “Who’d’a ever thought we’d overflow five bits?!?”)

Wednesday, April 19

1:30pm Opening Remarks – Anne Mitchell, ISIPP, General Chair
John Wharton, Applications Research, Program Chair
David Rosenthal, Stanford University, Connectivity Czar

1:45pm System Adaptation and Intelligent Design – John Wharton, Applications Research, Chair
  • Sam Wood, Modern Systems Research, Inc.: The Internet Stroger Switch: Packet Routing for Bell-Heads
  • Dave Hylands, Broadcom: Hobbyist Robotics

2:45pm Break

3:15pm Sensors and Transducers – Tim Pozar, Late Night Software, Chair
  • David Josephson, Josephson Engineering: A Sound-Pressure Tensor Transducer
  • Jano Banks, Radiient Technologies, Inc.: Wireless Audio You’d Actually Want to Listen To
  • Marc LeBrun, Adozu, Inc.: An Application of Active RFID to Real-Time Location Systems

4:45pm Reception and Dinner

7:30pm Athematic Short Talks – John Wharton, Applications Research, Timekeeper
  [Assorted 20-minute talks. Speaking order subject to minor tweaks.]
  • Mike Cheponis, California Wireless, Inc.: Adventures in Random Global Synchronicity
  • Christine Peterson, Foresight Nanotech Institute: How the Patent System is Screwing Up Nanotechnology
  • Nancy Blachman, Google Guide: The Joys and Frustrations of Google
  • John Markoff, The New York Times: Hookah-Smoking Caterpillars
  • Bernard Peuto, Concord Consulting: How to Take Care of Your Own History: The Open Collecting Movement and Its Impact on Collecting Institutions
  • Michael Levy, Prediction Marketing, Inc.: Three Definitions of Luck
  • Dave Hampton, SoundsAmazing: How Systems Learn

10:30pm Munchies and Late Night Videos! – Bruce Koball, Motion West, Digital VeeJay
Thursday, April 20

8:30am Health Care Technology – Brian Berg, Berg Software Design, Chair
• Bob Horst, Tibion Corporation: Bionic Actuators
• Tom Rolander, Amobian Technologies: An Engineer Approaches Home Health Care
• Robert Sloan, Philips Applied Technologies: Mobile Medical Monitoring

10:00am Break

10:30am Eponymous Microprocessor Session – Ken Shoemaker, Intel Corp., Chair
• Ken Shoemaker, Intel Corp.: What’s Really Inside Your Cell Phone?
• Andrew Singer, Rapport, Inc.: Kilocore™: A 256-Element Parallel-Processing System That Runs on Half a Watt
• Stan Mazor, Retired: Flashback: The Intel 4004 4-Bit Microprocessor

11:45am Lunch

1:30pm HouseWareZ – Craig Hughes, Gumstix, Chair
• Craig Hughes, Gumstix: Home LAN Security
• David S.H. Rosenthal, Stanford University: Linux for Grannies
• Mark Lacas, Max Home: Energy and Lifestyle Management

2:45pm Break

3:15pm Candy From Strangers – Marianne Mueller, Stanford University, Chair
• Mark Seiden, Consultant: The Many Flavors of Malware – Moderator
• John Geldman, Lexar: USB Storage Insecurity and Warm Blankets
• Luis Villa, Beckman Center for Internet and Society: Network Security: How We Might Solve It Ourselves, so the Lawyers Don’t Try to Solve It Themselves
• John Markoff, The New York Times: How Anti-Virus Companies are Scaring the Pants Off PC Users

5:00pm Reception and Dinner

7:30pm Open Discussion: A Rich Asilomar Tradition – Mary Eisenhart, YOYOW, RAT Patrol

(Ten-minute presentations on any subject you choose. Contact Mary Eisenhart as soon as practical after registration to secure your time slot, first-come first-assigned.)
Friday, April 21

5:30am  **Pre-Dawn Ark Races** – *Row 'em yourself!!*
(Self-organizing; attendance optional. BYOA)

- Jerry Klein, The Chatham Group: *“PTO” Doesn’t Have to Stand for the “Pirates and Trolls Office”*
- Zack Higgins, Kirkland & Ellis LLP: *Oh, the Patent Games People Play*
- Subroto Bose, Orrick, Herrington & Sutcliffe: *Pay No Attention to the Troll Beneath that Bridge!*

10:00am Break

10:30am  **Whither Goeth the Net?** Panel and group discussion and on the future of Internet governance, neutrality, business models, defenses against preëmptive attack, etc.
- Bill Cheswick, *Lumeta* – Moderator
  Panel members to include:
  - Robert Chew, *Chew and Chew Partners*
  - Michael Fischer, *Santa Clara University*
  - David Newman, *Recovering V.C./Consultant*

11:45am  **Closing Remarks** – Anne Mitchell, *ISIPP*, General Chairman

12:15pm  **Outdoor Barbecue Lunch** (weather permitting)

1:30pm  **Conference Adjourns**

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**Program Committee**

Michelle Aden  
Brian A. Berg  
Bill Cheswick  
Fred Clegg  
Mary Eisenhart  
Janet Guns  
Dewayne Hendricks  
Craig Hughes  
Bruce Koball  
Stan Mazor  
Anne Mitchell  
Marianne Mueller  
Tim Pozar  
David S.H. Rosenthal  
Ken Shoemaker  
Fred Terman  
Qarin Van Brink  
Bob Wedig  
John Wharton  
Pierluigi Zappacosta

*The Program Committee would especially like to thank Janet Guns for her great assistance and tremendous patience in helping coordinate this year’s Workshop.*
The Thirty-Third Asilomar Microcomputer Workshop
April 18–20, 2007

(Motto: Best. Multi-Radix-Palindrome Year. Ever! †)

Wednesday, April 18

1:30pm Opening Remarks – Anne Mitchell, ISIPP, General Chair
   • AMW: One Billion Seconds and Counting – Brian Berg, Berg Software Design

1:45pm Processor Design: Lessons of the Fall – Stan Mazor, Retired, Chair
   • The Symbol High-Level Language Computer: A Failure of Fairchild R&D
     Stan Mazor, Retired
   • Recent Failures in Microprocessors
     Andy Glew, Intel Corporation

2:45pm Break

3:15pm AI: The Next Generation – Stan Mazor, Retired, Chair
   • ADUMIS: Annotating Data Using Minimally Invasive Structure
     Conrad Barski, M.D., Software Developer
   • Facial Recognition
     Kazunori Okada, San Francisco State University
   • Hierarchical Temporal Memory -or- Why Can't a Computer Be More Like a Brain?
     Dileep George, Numenta

5:00pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, Wedig Consulting, Time Keeper
   • New-Kid Hacker Culture: Teaching the Young How to Make Things
     Tom Jennings, World Power Systems
   • Cultural Technical Practice of Harnessing a Real-Time Massive Online Community
     Marvin Park, University of California Irvine
   • TAA: Technically Advanced Aircraft, the Bonanza G36
     Dave Hampton, Sounds Amazing! Design
   • An Ultrafast Optical Digital Technology: Smart Light
     Alan Huang, Terabit Corporation
   • My House, Live On the Internet
     Mark Lacas, MaxHome
   • Design Process for Low-Cost Toys
     Jeri Ellsworth, Self-Taught Electrical Engineer
   • Making Peace Between Viacom and YouTube: Sharing Videos with Invisible Commercials
     Bob Zeidman, Zeidman Consulting
   • Filling the Vacuum Microsoft is About to Create
     Chuck McManis, Google, Inc.

10:30pm Post-Athematic: The Next Generation – Bruce Koball, Motion West, Producer
Thursday, April 19

8:30am  Storage: Heroic Technology Racing After Exploding Demand  
        Brian Berg, *Berg Software Design*, Chair  
        • A Brief History of Storage: ‘How’ Chasing ‘What’ and ‘Why’ -or-  
          What Is All That Stuff, and What Do You Intend To Do With It?  
        • Consumer Storage is ‘Mass’ Storage  
        • Storage on the Lunatic Fringe  
          Tom Ruwart, *Sherwood Information Partners, Inc.*

10:00am  Break

10:30am  Eponymous Microprocessor Session – Ken Shoemaker, *Intel Corporation*, Chair  
        • Intel Architecture Processor Technology: Not Your Father’s Sliced Bread  
          Kevin Rudd, *Intel Corporation*  
        • CUDA: A New Model for Computation on the GPU  
          Nicholas Wilt, *nVidia Corporation*  
        • Audio Signal Processing: From Valves to VLSI  
          Patrick Warrington, *Calrec Audio, Ltd.*

12:00pm Lunch

1:30pm  Data Mining – Marianne Mueller, *Gardener*, Chair  
        • Sloan Digital Sky Survey  
          George Fekete, *Johns Hopkins University*  
        • How I Might Spend $50MM of Black Money at the NSA  
          Bill Cheswick, *AT&T*  
        • “Nurse, This is Mr. Cheswick”: Mining Public Sources for Private Information  
          Ellen Cousins, *Primos Research*

3:00pm  Break

3:30pm  Aerospace: Around, Above and Beyond – Dewayne Hendricks, *Tetherless Access*, Chair  
        • Federal Space Policy and FAA Guidelines for Space Travel  
          Dewayne Hendricks, *Tetherless Access*  
        • Webcams From Space  
          Rick Voreck, *Space Systems/Loral*  
        • How’s Your Suntan Coming? Dyson Dots Revisited  
        • Saving the World: A Holistic Approach to Pragmatic Geo-Engineering  
          John Wharton, *Applications Research*

5:00pm  Reception and Dinner

        (Ten-minute presentations on any subject you choose. Contact Mary Eisenhart as soon  
        as practical after registration to secure your time slot, first-come first-assigned.)
Friday, April 20

5:30am  Pre-Dawn Aston-Martin Speedboat Races
(Self-organizing; attendance optional. Bring your own mini JetCopter. And a license to hack.)

8:15am  Ad-Hoc Wireless – Craig Hughes, *Gumstix*, Chair
• Big Sur WISP
  Ken Shoemaker, *Intel Corporation*
• USRP: Universal Software Radio Peripheral
  Matt Ettus, *Ettus Research, LLP*
• Why You Want Your Own Cellphone
  Matt Hamrick, *Silicon Valley Homebrew Cellphone Club*

9:45am  Break

10:15am Interesting People Doing Interesting Things in Interesting Places
Michelle Aden, *Sun Microsystems, Inc.*, Chair
• Mohenjo Daro: When Engineers Ruled
  Christine Cockey, *Mistral Mountain*
• Pushing Peas Uphill: Complexity, Culture, and Corruption
  Jane Sargent, M.D., *University of Massachusetts Memorial Medical Center*
• Structural Changes and Their Impact on Startups
  Dave Newman, *Independent Director/VC*

11:45am  Closing Remarks – Anne Mitchell, *ISIPP*, General Chair

12:15pm Outdoor Barbecue Lunch (weather permitting)

1:30pm Workshop Adjourns

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**Program Committee**

Michelle Aden  Dewayne Hendricks  David S.H. Rosenthal
Brian A. Berg  Craig Hughes  Ken Shoemaker
Bill Cheswick  Bruce Koball  Fred Terman
Fred Clegg  Stan Mazor  Bob Wedig
Mary Eisenhart  Anne Mitchell  John Wharton
Janet Guns  Marianne Mueller  Pierluigi Zappacosta
Tim Pozar

† Note that: 33 in decimal = 33.  33 in binary = 100001.  2007 in hex = 7D7.
*Let’s all wave a big hello to Charles Simonyi on our way to the dining hall! Reentry is scheduled for Friday morning, Pacific time. Godspeed, Charles.*
The Thirty-Fourth Asilomar Microcomputer Workshop

April 16–18, 2008

(Motto: It’s the Year of the RAT!)

Wednesday, April 16

1:30pm  Opening Remarks – Marianne Mueller, Gardener Communications, General Chair
          John Wharton, Applications Research, Program Chair
          Fred Terman, Naval Postgraduate School, Arrangements Czar

1:45pm  Eponymous Microprocessor Session – Ken Shoemaker, Intel Corporation, Chair
          • Restructuring the x86 Microarchitecture to Improve Power Efficiency
            Ken Shoemaker, Intel Corporation
          • The Intel Nehalem Processor Architecture
            Kevin Rudd, Intel Corporation
          • Computers and Cities
            Forrest Warthman, Warthman Associates

3:00pm  Break

3:30pm  How Green is Our (Silicon) Valley? – Brian Berg, Berg Software Design, Chair
          • Reflections on the Solar Market: An Overview of Commercial Solar Energy
            Chip Krauskopf, Entrepreneur
          • Solar Energy @ HOME: Using Pattern Analysis on the Urban Landscape
            Yiyi Miao, San Francisco State University
          • Making Cents of Solar: Some Reasoning Behind the Solar Craze
            Miguel Gomez, ActSolar

5:00pm  Reception and Dinner

7:20pm  Athematic Short Talks† – Bob Wedig, Wedig Consulting, Time Keeper
          • How Color Vision Works: Everything They Taught Us at School Was Wrong!
            Clive “Max” Maxfield, Techbites Interactive
          • The 700 MHz Spectrum Auctions: Much Ado About Nothing!
            Dewayne Hendricks, Tetherless Access, Inc.
          • Open-Source Physical Security: A Third Way?
            Christine Peterson, Foresight Nanotech Institute
          • Naughty Bits: Has the Adult Online Industry Learned Anything From
            Mainstream Silicon Valley?
            Matt Peterson, Meta Interfaces
          • How to Document Software History
            Bernard Peuto, Concord Consulting
          • How MySpace Has Forever Changed MeatSpace
            Clayton Stark, Flock, Inc.
          • The EvoGrid: An Artificial Life Experimental Cyberspace
            Bruce Damer, Biota.org
          • Where Robot Cars May Actually Take Us
            Brad Templeton, Electronic Frontier Foundation

10:45pm  Optional Unstructured Après-Athematic Non-Session – Bruce Koball, Motion
          West, Non-Chair
Thursday, April 17

8:15am  **Alternative Energy Technology** – Bill Cheswick, *AT&T Research*, Chair  
- Re-Assessing the Energy Crisis and Future Energy Resources  
  Robert Cousins, *Cousins Research*  
- Doing the Splits: Looking Ahead in Nuclear Reactors  
  Christine Cockey, *Mistral Mountain*  
- Farming Microalgae: From Photons to Fuel  
  Guido Radaelli, *Aurora Biofuel*

10:00am  **Break**

10:30am  **Internet I**: (?:) – Dewayne Hendricks, *Tetherless Access, Inc.*, Chair  
- After the Last IPv4 Address  
  Matthew Kaufman, *Adobe Systems Inc. / Gatespeed Broadband*  
- A Perfect Storm: The Impending Internet Melt-Down  
  Tim Pozar, *Late Night Software*  
- The Internet Identity Crisis: What Does Identity Mean Online?  

12:00pm  **Lunch**

1:30pm  **Sea Tech: Voyager** – Christine Peterson, *Foresight Nanotech Institute*, Chair  
- The World in 25 Feet: Over the Roads, Through the Canals and Across the Oceans in an Aluminum Tug Yacht  
  Charles Vollum, *Boojum*  
- An Autonomous Solar-Powered Boat – Architecture & Design (Re)Considerations  
  Mark Moulding, *MARKE Systems, Inc.*  
- Out of the Box: The Role of Ignorance in the Creation of a New Species  

3:00pm  **Break**

3:30pm  **Internet II**: (:-) – Tim Pozar, *Late Night Software* & Marianne Mueller,  
  *Gardener Communications*, Co-chairs  
- Customer-Driven Network Hardware Reliability  
  David Hsiao, *Cisco Systems, Inc.*  
- Combating eFraud and Internet Abuse  
  Rick Wesson, *Support Intelligence, LLC*  
- Why Networks Still Suck: Rearchitecting Systems to Promote Innovation  
  Martin Casado, *Stanford University*

5:00pm  **Reception and Dinner**

7:30pm  **Open Discussion: A Rich Asilomar Tradition** – Mary Eisenhart, *Mary Eisenhart Editorial Services* & Craig Hughes, *Pro Se*, Tag-Team RAT Patrols;  
  Bruce Koball, *Motion West*, Resident A/V Wizard  
  (Ten-minute presentations on any subject you choose. Contact Mary Eisenhart as soon as practical after registration to secure your time slot. *First-come first-assigned!* )
Friday, April 18

5:30am  Pre-dawn briefing of Arianne Range Safety Officer volunteers††
        (Self-organizing; attendance optional.)

8:15am  The AMW Great Debate on Network Neutrality – Dewayne Hendricks, Tetherless
        Access, Inc., Moderator
        Position statements and panel discussion. Panelists to include:
        • Bill Cheswick, AT&T Research
        • Matthew Kaufman, Adobe Systems Inc. / Gatespeed Broadband
        • Brad Templeton, Electronic Frontier Foundation
        • (additional panelist(s) to be announced)

9:30am  Break

10:00am  The Technology of Aging – Pierluigi Zappacosta, Sierra Sciences, Chair
        • Deciphering the Genetics of Human Aging
          Michael West, BioTime Inc.
        • Prospects for Truly Defeating Aging
          Aubrey de Grey, The Methuselah Foundation
        Panel discussion and Q&A moderated by Pierluigi; above speakers to be joined by:
        • Mark Muhlestein, Aging Homo Sapiens
        • Christine Peterson, Foresight Nanotech Institute

11:45am  Closing Remarks – Marianne Mueller, Gardener Communications, General Chair

12:15pm  Outdoor Barbecue Lunch (weather permitting)

1:45pm  Workshop Adjourns

Program Committee

Michelle Aden  Tim Pozar
Brian A. Berg  Craig Hughes  David S.H. Rosenthal
Bill Cheswick  Bruce Koball  Ken Shoemaker
Fred Clegg  Stan Mazor  Fred Terman
Mary Eisenhart  Anne Mitchell  Bob Wedig
Janet Guns  Marianne Mueller  John Wharton
Dewayne Hendricks  Christine Peterson  Pierluigi Zappacosta

† The International Space Station will make an overflight at 8:15pm Wednesday evening,
briefly passing from right to left approximately 12° above the southwestern horizon.
†† Vandenberg AFB has agreed to launch a spare Arianne missile Friday for the amusement
of this year’s attendees. Viewing details will be announced as they become known.
This program printed on recycled algae.
Wednesday, April 15

1:30pm Opening Remarks – Marianne Mueller, General Chair
John Wharton, Applications Research, Program Chair
Fred Terman, Naval Postgraduate School, Arrangements Czar

1:45pm Back to the Future! – John Wharton, Applications Research, Chair
  • Sea Cruise: A Galaxy 19 Launch-Mission Travelogue
    Rick Voreck, Space Systems/Loral
  • The EvoGrid: Ratcheting Up Complexity Toward an Artificial Origin of Life Event
    Bruce Damer, Biot.org -and- Institute for Advanced Study
  • Where Else May Robot Cars Actually Take Us?
    Brad Templeton, Electronic Frontier Foundation

3:00pm Break

3:30pm Digital Cinema: The Long Road – Brian Berg, Berg Software Design, Chair
  • Digital Cinema: Who, What, and Why
    Bill Elswick, Entertainment Technology Associates, Inc.
  • Mastering and Distribution: From Film to Digital
    John Hurst, CineCert LLP
  • Digital Cinema: Content Security and 3D
    Pierre-Anthony Lemieux, Consultant
    Panel Q&A with Bill, John, and Pierre-Anthony

5:00pm Reception and Dinner

7:30pm Athematic Short Talks – Bob Wedig, Wedig Consulting, Inc., Time Keeper
  • Engineering a Bio-Robotic Knee Orthosis: Testing Patience and Testing Patients
    Bob Horst, Tibion Corporation
  • An Unclassified Look at the GiG and the Future of Government Networks
    Bill Cheswick, AT&T Labs-Research
  • Hooking Up the Farallons: Wireless is For the Birds!
    Tim Pozar, Late Night Software
  • Resurrecting an Ampex FR-900 Tape Drive to Retrieve Lost Lunar Imagery
    Dennis Wingo, Skycorp Incorporated
  • Jean Hoerni and the Planar Process
    Christophe Lecuyer, University of California
  • Lost in a (Computing) Cloud: The Joys of Flying Blind
    Joel Williams, emLinux
  • A Personal Epiphany on Green and Alternative Transportation Systems
    Dewayne Hendricks, Tetherless Access
  • Twill Wicked: Some Crazy Ideas for a New Kind of Car
    Chris Tacklind, Twill Tech Inc.
  • Star Trek: Boldly Going Where No Mac Had Gone Before
    Tom Rolander, CrossLoop, Incorporated

11:00pm Happy Hour
Thursday, April 16

8:15am  System Generations: Microcomputers Past, Present, and Future – Ken Shoemaker, Intel Corporation, Chair
  • What’s New in Microprocessors – As I See It
    Ken Shoemaker, Intel Corporation
  • Apollo 11: The Computer Inside®
    Dennis Wingo, Skycorp Incorporated
  • An Old Supercomputer Guy Looks at Modern Graphics Processors and Other Problems That Just Won’t Go Away
    Andy Glew, Intel Corporation
  • Parimics’ Parallel Processing Chipset: 20 TeraOps and 1000 GFLOPS for Machine Vision Applications
    Axel Kloth, Parimics Inc. R&D

10:00am  Break

10:30am  Inverting the Grid – Dewayne Hendricks, Tetherless Access, Inc., Chair
  • Augmenting the Smart Grid with Ad Hoc Sensors and Ambient Intelligence
    Warren Stringer, µSenti
  • Power To Plug In: Making Consumer Power Sources as Easy to Install as an Electric Dryer
    Kee Nethery, Kagi
  • The Rush to Clean Power: How Not to Produce Green Energy
    David Newman, Former CEO of a Green Energy Start-Up

12:00n  Lunch

1:30pm  Cybernetic Anthropology – Mary Eisenhart, Mary Eisenhart Editorial Services, Chair
  • Magical Thinking in Consumer Relationships With Their Data
    Cathy Marshall, Microsoft Research
  • Creating Markets and Capturing Network Value with P2P File Sharing
    Andrew Orlowski, The Register
  • An Expanded Role for Test-Driven Development: The Eclipse Foundation “Swim” Experience
    Ward Cunningham, AboutUs.org

3:00pm  Break

3:30pm  Censorship and Surveillance on the Internet – Marianne Mueller, Chair
  • Nation-State Routing: Censorship, Wiretapping and BGP
    Josh Karlin, University of New Mexico
  • Concept Doppler: Global Internet Censorship, and What We Can Do About It
    Jed Crandall, University of New Mexico
  • Interception, Traceback, and Jurisdictional Arbitrage in the Age of High-Availability Network Service Architectures
    Bill Woodcock, Packet Clearing House

5:00pm  Reception and Dinner

7:30pm  Open Discussion: A Rich Asilomar Tradition – Mary Eisenhart, Mary Eisenhart Editorial Services & Craig Hughes, Pro Se, Tag-Team RAT Patrols;
        Bruce Koball, Motion West, Resident A/V Wizard

( Ten-minute presentations on any subject you choose. Contact Mary Eisenhart as soon as practical after registration to secure your time slot. First-come first-assigned! )
Friday, April 17

5:30am  Pre-dawn comet search, satellite tracking, and UFO watch
( Self-organizing; attendance optional. )

8:30am  Multiple Views and Alternative Ways of Seeing – Tamara Munzner, University of British Columbia, Chair
• Biology is Destiny: Of Graphs and Genes
  Tamara Munzner, University of British Columbia
• Mixed Reality and the Chocolate Factory
  Maribeth Back, FX Palo Alto Laboratory
• Why One is Always The Wrong Number
  Jim Gettys, X.org

10:00am  Break

10:30am  WWED? (What Would Engelbart Do?) – Panel Discussion and Debate.
  Bill Cheswick, AT&T Labs-Research, Moderator
  Panel discussion, audience comments, and Q&A. Panelists to include:
  • Ward Cunningham, AboutUs.org
  • Jim Gettys, X.org
  • Kirk McKusick, Author and FreeBSD Committer
  • Andrew Orlowski, The Register

11:45am  Closing Remarks – Marianne Mueller, General Chair

12:15pm  Outdoor Barbecue Lunch (weather permitting)

1:45pm  Workshop Adjourns

Program and Planning Committee

Michelle Aden  Craig Hughes  Tim Pozar
Brian A. Berg  David S.H. Rosenthal
Bill Cheswick  Bruce Koball  Ken Shoemaker
Fred Clegg  Stan Mazor  Fred Terman
Mary Eisenhart  Anne Mitchell  Bob Wedig
Janet Guns  Marianne Mueller  John Wharton
Dewayne Hendricks  Christine Peterson  Pierluigi Zappacosta

† The Sea Launch Commander and Odyssey launch platform are on-station at the equator this week, preparing to launch a SICRAL 1B European communications and defense satellite. If the launch countdown begins while the Workshop is in progress we will attempt to patch a live video webcast into the AMW A/V system. Watch for further details.
The Fortieth Annual Asilomar
Microtechnology Workshop
2014.4.23-25

2014.4.23/Wed

Opening Remarks - John Wharton

Fabrication Technology
- Retrospective: Early Silicon-Based Microprocessors - Chad Leland Mitchell
- Desktop Semiconductor Foundries - Barry Bronson
- Space-Based Manufacturing - Paul Monus

Design Issues
- How to Use 10 Billion Nohms in a Trie - John Ahlstrom
- VLSI: The Party's Over, Now the Real Engineering Begins - Wendy Peikes
- When Will AI Arrive? - Marie Sullivan

Ethematic Topics
- What the Joint US/Japan/Europe DRAM Factory Fire Means to You - Jeff Deutsch
- Coping with Gigabyte-Sized Application Programs - L. Charlie Hobbs
- Where Are the Robots? - Rudy Rucker
- The Use of Antioxidants to Rid Your Body of Nanomachines - Jeff Deutsch

2014.4.24/Thu

Microprocessors
- A Demonstration of the NexGen Super 86 Chip-Set - John Ahlstrom
- Will Intel's P14 be the End of the x86 Line? - Mike Uhler
- When Will RISC Take Off? - Jack Mills
Hardware
- **Electron Spin Control Techniques for High-Density Memories** – Barry Bronson
- **Spoofing the Clipper-12 Encryption Chip** – John Ahlstrom
- **Neural Nets and Computer Neuroses: Your System Doesn’t Have a Bug, It Has an Attitude** – Wendy Peikes

Software
- **Software and Other Interactive Psychological Phenomena** – John Stautner
- **The Object-Oriented COBOL-2015 Language Standard (Proposed)** – John Ahlstrom
- **Who Makes the Best Windows NT: Microsoft, Sun, Novell, IBM, or Nintendo?** – Wendy Peikes

Wetware
- **Microprocessor-Based Disease and Germ Management** – Paul Monus
- **Will Genentech’s New Microbe-Processors Put an End to the x86? Or Are They Too Buggy?** – Brian Kelly
- **When Organics Pass the Turing Test: Ethical, Practical, and Conceptual Implications** – John Ahlstrom

Open Discussion: A Rich Asilomar Tradition

2014.4.25/Fri

Applications
- **Using N-Dimensional Automata to Outguess the Stock Market** – Stu Bjornsson
- **Speech Recognition in the New Newton: Can It Be Trained to Your Voice?** – Mike Uhler
- **Green Software: Tools for Environmental Management** – Doug Cox

Business Issues
- **How the Collapse of Microsoft Could Have Been Avoided** – Robert Johnson
- **Intel: Requiem for a Heavyweight** – Wendy Peikes
- **Can Bill Gates Be Stopped?** – Jim Rea

Outdoor Barbeque Lunch (ozone hole permitting...)