## **The Computer Museum**

November/December 1989



The Computer Bowl's Official Scorekeeper Chris Morgan reveals the Bowl trophy. On April 27, 1990, the West Coast will try to wrest it and the title "Computer Masters of the Universe" from the 1988 East Coast victors.

## Who Will Claim the 1990 **Computer Bowl?**

Will the East Coast keep their title as "Computer Masters of the Universe"? Or will it be wrested away by John Doerr, Bill Gates and their West Coast upstarts? The Museum's Computer Bowl occurs April 27, 1990, at the World Trade Center, in Boston.

East Coast Team Captain Patrick J. McGovern has issued his challenge: Comparing his war plan to that of World War II hero General Douglas McArthur, he plans to "conquer all sectors and achieve unconditional victory against the West."

McGovern, Founder and Chairman of the International Data Group, has recruited William Foster, President and CEO, Stratus Computer, Inc; Robert Frankston, Chief Scientist, Lotus Development Corporation; Edward Fredkin, President, Capital Technologies, and Russell Planitzer, Chairman of the Board of Prime Computer, Inc.

West Coast Team Captain John Doerr, a partner in the venture capital firm of Kleiner Perkins Caufield and Byers, is not daunted: "While McArthur won World War II, his dated tactics doom Pat McGovern's East Coast team to an ignominious defeat."

Joining him are Stewart Alsop II, Editor of P.C. LETTER; Charles House, General Manager, Software Engineering Systems Division, Hewlett-Packard; William H. Gates, Chairman of the Board, Microsoft Corporation; and Lawrence Tesler, Vice President, Advanced Technology, Apple Computer, Inc.

The 1988 Bowl's highest point scorer

Mitchell Kapor, Chairman, ON Technology, Inc., will pose the questions. William "Bill" Joy, Vice President of R&D, Sun Microsystems, Inc., and Dr. John William "Bill" Poduska, Sr., Chairman and CEO, Stellar Computer Inc. (soon to be Stardent Computer Inc.), will serve as judges for the event. Christopher Morgan, rare computer book dealer, is Official Scorekeeper and Pre-Game Host.

The award-winning PBS TV series Computer Chronicles will feature the Bowl nationwide in two later broadcasts as well as handling the live satellite feed to the West Coast where Museum members and the general public will watch live.

The 1988 Bowl, a one of a kind fundraising event that played out the legendary East/West Coast high tech industry rivalry, raised more than \$250,000 in cash, trade, and services, attracted the support of more than 50 sponsors and many enthusiastic volunteers, and earned media attention worldwide.

The 1990 event promises to be even grander. Chaired again by Bowl Founder Pat Collins Nelson, it offers a variety of sponsorship and volunteer opportunities. For more information, contact Bowl Project Manager Kate Jose at 617-426-2800 ext 346.

## Museum Receives Digital Grant

More Than Halfway to Walk-Through Computer

Digital Equipment Corporation has awarded The Computer Museum a threeyear grant totalling \$950,000 in cash and equipment to support its

long-term exhibit developmentand educational programs. Of the \$950,000, \$150,000 is earmarked for the Museum'snew Walk-Through Computer exhibit.

"Such a significant commitment from a majorcomputer company like Digital Equipment Corporation is exciting," says Gardner Hendrie. Chairmanofthe Museum's Board. "This grant enables the Museum to implement its ambitious exhibit development plans and givesusimportant equipmenttohelpus work and exhibit better day today.'

According to William C. Hanson, Digital's Vice

President, Manufacturing Operations, and Chairperson of the Corporate Contributions Committee, "This three-year commitment reflects Digital's philosophy to support quality museum programming in all its forms. We encourage other corporations to join us in assisting The Computer Museum with its efforts to chronicle the history of the computer industry and its impact on society."

With the Digital gift, the Museum has now raised more than half the \$750,000 needed for the Walk-Through Computer. The exhibit—the first of its kind ever built—will use state of the art technology and stunning theatrical effects to create a giant model of a computer that visitors can walk through and interact with-complete with huge monitor, 25-foot keyboard and bumper-car sized mouse.



Part of the grant from Digital Equipment Corporation will fund the Walk-Through Computer. Exhibit Developer Chip Morrison compares a real chip (on right) with the model of one (on left) that is 40 times bigger.

## NEW FACES

Elizabeth Armbruster joined the Museum as Public Relations Coordinator in September to work with PR Manager



Gail Jennes in promoting the Museum's events and activities. A 1989 graduate of Drake University with BA in journalism and PR, Armbruster interned

Liz Armbruster

last summer at a public relations firm in Des Moines, Iowa. She also has worked as a tour guide for the Iowa State Capital Building, and won an award for copyrighting in 1988.

Also in September, Natalie Rusk signed on as Education Coordinator. A Brown University graduate in Chinese with a master's in interactive technology from Harvard Graduate School of Education, Rusk will work with Director of Education Adeline Naiman on the Resource Center, Computer Learning Month, and Kids Computer Fair. Rusk has taught LEGO/Logo at the Museum of Science, has worked with teachers as a consultant to the MIT Learning and Epistemology Group, and has developed programming and

educational materials. Also a warm welcome to new Museum interpreters Greg Geboski, and John Les.



Natalie Rusk

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### Museum Sets Visitor Record

Last summer, the Museum had more visitors than ever—35,000 in July and August. That represents a 40 percent increase over 1988. Our featured summer exhibition, "Computer Art in Context: SIGGRAPH '89 Art Show," which opened June 30, attracted widespread international media coverage. Extended by popular demand until January 6, 1990, the show has drawn new audiences to the Museum and continues to interest journalists.

Lured by the Art Show and more and more interactive exhibits, our audiences find the Museum interesting and fun.

The Art Show and the new exhibits represent a flowering of cooperative relationships the Museum has developed. Initiated as part of the ACM's special interest group's annual conference on graphics, several receptions during closed evening hours allowed conference attendees to see not only the Art Show but also the Museum's permanent galleries that now include the ACM SIGGRAPH-supported installation of The Interactive Image exhibit.

Another product of our collaboration with a wide range of groups is our educational Resource Center. The MIT Media Laboratory provided software, Apple Computer and Commodore gave hardware, and a Boston high school student gave his time.

More than 150 corporations contribute to the Museum and often. The relationship goes beyond financial support. Our bond with Hewlett-Packard Company (HP) is a prime example. In 1985, HP helped us with an exhibition at the Museum on pocket computing. It was so successful that, with more help from HP, we rebuilt it for the road. "Computers in Your Pocket" is now on display at its 10th site, Mid-America Museum, in Hot Springs,

Arkansas. HP also gave us high performance workstations for the Smart Machines Gallery in 1987. Last summer, we worked together to create a new educational exhibit on computer graphics rendering.

Even as I write, we are also now collaborating with The Acer Group, a company 12 time zones away in Taiwan, to create an exhibit showing how a "bilingual" computer handles Chinese and English characters. And the front page of this NEWS describes an exciting new collaboration with Digital Equipment Corporation.

Our continuing success depends on these creative cooperative partnerships. We look forward to enhancing our existing friendships and to developing many new ones.

Curator/Acting Executive Director

The Computer Museum NEWS (November/December 1989) Contributors: Gwen Bell, Janice Del Sesto, Michael Halwes, Kate Jose, Adeline Naiman, Natalie Rusk, Christina O'Sullivan, Oliver Strimpel, Brian Wallace Editor: Gail Jennes Design & Layout: DesignSystems. The Computer Museum NEWS is published six times per year by The Computer Museum, Museum Wharf, 300 Congress Street, Boston, MA 02210, (617) 426-2800. The NEWS is complimentary with Museum membership.Photo processing courtesy Boris Master Color; Typesetting courtesy of Advanced Computer Graphics. Special thanks to Cigna Systems Corporation for printing The Computer Museum NEWS.





Richard Fowler

Acting Executive **Director** Oliver Strimpel says that the Museum's "continuing success depends on its creative cooperative partnerships."

## UP & RUNNING

The Computer Museum has dramatically enhanced its vision exhibit in the Smart Machines Gallery with a Cognex 2000 vision system. The state of the art system donated by Cognex Corporation detects three shapes instead of one, is ten times faster and much more accurate. After visitors place square, round and triangular objects under a TV camera, the computer examines the picture for sharp contrasts in brightness that correspond to the objects' edges. Then it matches the shapes

within the edges with

shapes in its memory

and names each one.

Such vision systems

inspect manufactured

X-rays. Volunteer Fran Taylor wrote the

exhibit software and

Thursday evenings at

debugging the system.

spent over a dozen

Carnegie Mellon

computer scientist

Roger Dannenberg, creator of the original

music program for the

Accompanist" in the

returned to update the

exhibit. When visitors

**Smart Machines** 

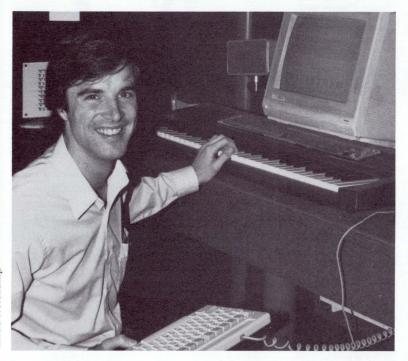
Gallery, recently

the Museum

"Computer

items, and analyze

can guide robots,



Recently, computer scientist Roger Dannenberg returned to the Museum to work on enhancing the "Computer Accompanist" exhibit.

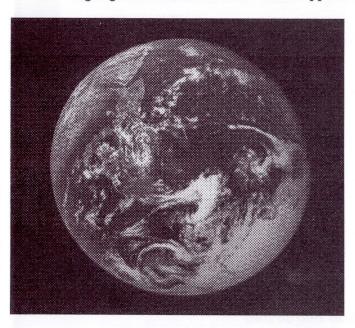
play the tune "Old MacDonald," a computer, programmed to accompany them, "listens" and then plays along, adjusting its speed to theirs. The exhibit software has information about the loudness, pitch, and duration of the musical performance, and a pattern matcher that enables the computer to compare the visitors' performance to the written score.

Dannenberg's proposed new version gives visitors more ways to control the program. It "represents the state of the art in computer understanding of musical performance," he says.

## **ON THE ROAD**

## The SPOT Exhibit Travels

A traveling version of "Terra Firma in Focus," based on the spectacular exhibition of digital satellite imagery at The Computer Museum last year, made its debut in July at the Space Coast Science Center in Melbourne, Florida. The 63-image exhibit, traveling under the auspices of the Association of Science-Technology Centers, Washington, DC, highlights both scientific and artistic applications of remote sensing with large scale



black and white and color images from the SPOT satellite. The exhibit was developed by the SPOT Image Corporation with curatorial direction from The Computer Museum.

At press time, the following institutions had booked the exhibition: September 23, 1989-March 11, 1990: Bradbury Science Museum, Los Alamos, New Mexico; March 31-May 13, 1990: Science Museum of Virginia, Richmond; June 2-September 16, 1990: Chicago Academy of Sciences, Illinois; October 6-November 25, 1990: The Science Place, Dallas, Texas; February 16, 1991-March 31, 1991: Arizona Museum of Science and Technology, Phoenix.

The exhibit is available for \$1500 to ASTC members, \$1800 nonmembers. Call Tracey Prendergast at ASTC, (202)371-1171 for booking information.

#### 1989-90 Breakfast Seminar Series Opens

Management consultant John Diebold of The Diebold Group, Inc., New York, will discuss "Evolution and Change in the Information Technology Industry" November 30, 1989, at The Computer Museum. His firm conducts proprietary research on new trends in the information technology industry for users and suppliers. The talk is part of the 1989-90 Breakfast Seminar Series offered by the Museum to Corporate Members and their guests.

Other Seminar speakers this fall have included: Pier Carlo Falotti, President and **Chief Executive** Officer of Digital Equipment Corporation International (Europe), and critic-author George Gilder. Falotti oversees Digital's operations in Europe, Africa, and the Middle East, He addressed the "Challenge of **U.S.** Computer Manufacturers in Europe after 1992." Gilder, who is the author of eight books

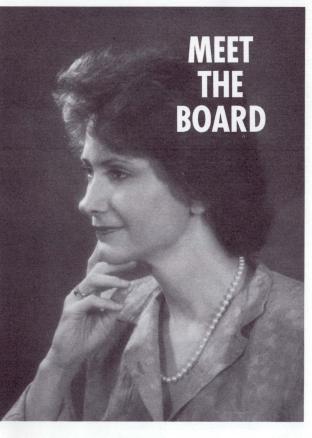


Pier Carlo Falotti, of Digital Equipment Corporation International (Europe), toured the Museum after his talk on future challenges for the U.S high tech industry in Europe.

including Microcosm: The Quantum Revolution in Economics and Technology, discussed "The Law of the Microcosm: The Real Future of Information Technology."

The Seminar Series features distinguished experts representing both suppliers and users of technology who share what they know about emerging trends with the Museum's Corporate Members. Future speakers in the series will be announced later.

AT&T, Bank of Boston, BayBank Boston, Coopers and Lybrand, Eastech Management Company, Fenwick Partners, Gaston & Snow, Hambrecht & Quist, Hill and Knowlton, Ropes & Gray, and Russell Reynolds Associates sponsor the forum. For more information, call the Museum's Development Department.



Business strategist Lynda Bodman believes that the Museum's "programmatic opportunities can position it to be a flagship both for the nation and the world."

## Lynda Bodman:

Business Strategist Views Museum a "Must" for Boston Residents and Visitors

"The Computer Museum is the premiere institution now capturing both the history and future of the nation's most important industry," says Dr. Lynda Schubert Bodman. A member of the Board since 1988, Bodman is President of Schubert Associates, Inc., Boston, a management consulting firm specializing in strategic planning for the information industry. She regularly advises both early-phase and Fortune 50 multinational companies.

A former Assistant Professor in Marketing at the Harvard Business School, she has written many studies on the success strategies of both hardware and software companies. With a BA from the University of Wisconsin, MA and PhD from The University of Chicago, and an MBA from Harvard, she is also a Fellow of the Ford and Woodrow Wilson Foundations.

#### Recently joining the Executive Committee, Bodman hopes to draw upon her marketing expertise.

"I want to ground the Museum as an institution in Boston and raise its national and international profile. Its programmatic opportunities can position the Museum to be a flagship both for the nation and the world. The best of the Museum needs to be available beyond Boston."

#### With a particular interest in artificial intelligence, Bodman views the Smart Machines Gallery as an especially important exhibit.

"Smart Machines is a wonderful example of a collection of interactive and instructional text-based exhibits which address major technological breakthroughs in artificial intelligence and communicate them to the public in terms they can understand.

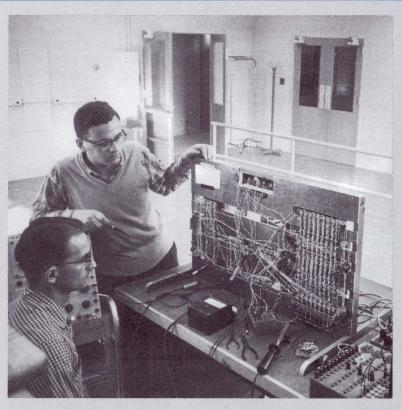
"My specialty is looking at how technology can be used to move people into the future. The Museum offers visitors a primer on 48 years of technological development and a laboratory of technologies that will help move people into the future."

#### She believes that no city in the United States is better suited than Boston — as the Hub for both education and technological development— to be host of The Computer Museum as it continues to emerge.

"The kinds of exhibits the Museum now proposes—such as the giant Walk-Through Computer and Milestones of a Revolution—are exciting, worthwhile, illuminating, and entertaining, so much so that they could make the Museum a must-see part of Boston for both residents and tourists within the next five years."

## FROM THE COLLECTION

Dr. Gernst Metze (on the left) and Harold Lopeman (right) look at the first shift register of the ILLIAC I. This 1959 photo from the University of Illinois at Urbana was donated to the Museum's photo archives by Professor R.E. Meagher. Components of the ILLIAC I were given to the collection directly from the Department of Computer Science, University of Illinois. In the Museum's search for "survivors," photographs, films, and memoirs provide the "life" to our artifacts in the collection. So, please don't dump the materials from your desk drawers. Search for hidden treasures for The Computer Museum.



## **A Salute to our Supporters**

Individual and corporate membership income supports the Museum's continuing educational and exhibit programs.

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(under \$100) July and August 1989

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## UPCOMING FVFNTS

#### NOV 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

#### **EXHIBITION EXTENDED** 1

**EXHIBITION EXTENDED Through January 6, 1990:** "Computer Art in Context: SIGGRAPH "89 Art Show" An exhibition of spectacular new computer art from artists around the world. The show features 2- and - 3-dimensional works, kinetic sculpture, interactive environments where visitors can take part, installation pieces, animation, and polydimensional works on videotape. Exhibition juried by panel of international artists and curators.

#### EXHIBIT 1

**EXHIBIT Through December 1, 1989: "Atari Race Car Simulator"** Slide into the cockpit of the most realistic driving simulation game ever developed. You actually feel the force of the road on the steering wheel as you round curves and jump bridges. A state of the art computer video game—complete with tire squeals, swivel seat, gas pedal, stick shift, and high resolution 3-D computer graphics on a "windshield." In the PC Gallery.

EXHIBIT OPENING
Tuesday, December 5, 1989: "Acer Bi-lingual PC" The first computer system to use both the English alphabet and the Chinese character system. Developed and donated by The Acer Group, the workstation joins the Museum's family of permanent exhibits. In the PC Gallery.

#### SPECIAL HOLIDAY EVENTS/EXHIBITS 26

SPECIAL HOLIDAY EVENTS/EXHIBITS Tuesday, December 26-Saturday, December 30, 1989: "Invention Days" Kids of all ages can dream up and build their own inventions—everything from robot pets to works of art. They can also hook LEGO bricks, lights, motors and sensors to computers to make them come alive. Also featured: demonstrations of robots from MIT's Artificial Intelligence Laboratory. Plus visitors can "pilot" a 747 via the Museum's new state of the art flight simulator from Silicon Graphics.

#### WORKSHOP 30

#### Saturday, December 30, 1989: 10am-1 pm "Build Your Own Robot Workshop" A

"Build Your Own Robot Workshop" A high tech holiday gift to remember and share with a child or a young friend (age 10 to 15). In the Museum's popular Robot Workshop, each adult-child team builds a mobile sensing robot ("Peppy" or "Medusa") with the help of Museum staff and takes it home to dazzle friends and family. Robot building kits available at the Museum Store. Kitis\$38.95; Workshop(including all tools and batteries) \$20 per team; Museum members, 10 percent discount. Please register early! SPACE IS LIMITED TO 30 TEAMS OF (1) ADULT AND (1) CHILD. Each child must have an adult partner and a kit. TO REGISTER: Call the Store (617)426-2800, ext.307. Tuesday-Sunday 10am-5 pm, Friday until 9pm. Credit cards accepted.

#### WINTER HOURS:

Visit The Computer Museum Tuesday-Sunday. 10am to 5pm (Fridays until 9pm). Closed Monday except Boston school holidays and vacations. Closed Thanksgiving, Christmas, and New Year's Day. Public tours Saturday and Sunday at 1:30 and 3pm. Summer hours: daily.

#### ADMISSION

Adults \$5.00, students and elders \$4.00. Half price Friday evenings. Free to Museum

members and children under five. For more information, call our talking com-puter at **(617)423-6758**.

# IMP R

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## N Days And Counting...

To sharpen your wits in preparation for the next Computer Bowl in 1990, the NEWS tried to stump you with this technological teaser in the last issue:

Who coined the word "automation"? The answer is....Management consultant John Diebold in 1954. Here's the next teaser:

Which computer start-up was first announced on the sports pages of a major metropolitan daily in the **United States?** 

Look for the answer in the January/February NEWS.

#### **READ ABOUT KIDS COMPUTER FAIR IN NEXT ISSUE!**

## **Join** or give a holiday gift membership:

Members get free admission for one year; The Computer Museum NEWS, a bi-monthly newsletter of Museum activities; the Annual, a richly illustrated journal of computer history; invitations to exhibit previews and member-only events; advance notice of exhibitions and lectures; a 10% discount on purchases over \$5 in The Computer Museum Store; and the opportunity to buy admission pass booklets at significant savings.

Individual Memberships	Family Memberships	Contributing Memberships
🗆 \$30 One-year	🗆 \$45 One-year	□ \$500 Donor
🗆 \$50 Two-year	🗆 \$80 Two-year	□ \$250 Sponsor
□ \$20 One-year student*		□ \$100 Friend
<b>Yes,</b> sign me up! My check, payable to The Computer Museum, is enclosed in the amount of \$		
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Or, charge my 🗆 MasterCard, 🗆 Visa, 🗆 American Express.		
Card# Expiration Date Signature		
New Member Name		
Name for 2nd Family Card		
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□ Please contact me about volunteering at the Museum.		
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#### Fractals for a New Year...



Fractals for a New Year..Need a new calendar for next year? The Computer Museum Store has a fractal Cosmos 1990 Calendar that features stunning computer generated ractal art. Great for home or office, the 11 inch square wall calendaraddresses the topics of chaos and order with striking images of many colors. Captions describe each month's image with provocative quotations on achievement and science. Thanks to computers, research in mathematics can lead to infinite arrays of artistic shapes and images. Fractals themselves are mathematical objects with a fractional number of dimensions. Since computers can render fractal images costlines or rivers, fractals have become tools in generating artificial landscapes. Calendar costs \$9.95 (Members, \$8.95). To order, call (617) 426-2800, ext. 307. To find out more about fractals, *The Beauty of Fractals*, by H.O. Peitgen and P. Richter and *The Science of Fractal Images*, edited by Peitgen and D. Saupe, are available at the Museum Store.



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