

The Computer Museum

NEWS

Turing Test Round One

Loebner Prize Competition: November 8

The first round of the classic Turing Test of machine intelligence will be held November 8, 1991, at The Computer Museum. New York philanthropist Dr. Hugh Loebner, President of Crown Industries, Inc., has offered a \$100,000 prize for the first machine to pass the test. The

historic contest is being administered by the Cambridge (MA) Center for Behavioral Studies and the Museum.

In 1950, the brilliant British mathematician Alan Turing issued the ultimate challenge to computer science. He proposed an experiment to determine if a machine could think. His test requires a computer to emulate human behavior (via a computer terminal) so well that it fools human judges into thinking its responses are from a person.

"...any computer that actually passes the unrestricted Turing Test will be, in every theoretically interesting sense, a thinking thing." (Daniel C. Dennett)

While the subject has been debated for decades, artificial intelligence experts will get their first shot at a Turing Test real-time this fall at the Museum. Instead of being open-ended—a challenge that no computer can approach at this time—each “conversation” will be limited to a particular subject to give the computer a better chance. Using a format akin to a public chess match, the judges will hold conversations on several computer terminals in the Museum’s auditorium. The responses of each terminal will be controlled either by “human confederates” or computers. The audience will be able to see the conversations on large screens near each terminal.

Afterwards, the tally of scores comparing human and computer performances will be announced. The programmer whose computer gets the highest score will receive a \$1,500 award and a bronze medal. The cash award will be increased each year. In some years, open-ended Turing Tests will be held. When a computer system passes an open-ended test, at least \$100,000 will be awarded and the prize abolished.

The contest has provoked fascinating questions. “Should a winning machine get the prize money itself?” asked AI writer Douglas Hofstadter. A panel of distinguished computer scientists, philosophers, and psychologists is grappling with such questions as well as overseeing planning.

Over 130 individuals and institutions around the world have requested application materials. The finalists will be chosen by September 15, 1991. “We can’t reveal who they are or where they’re from because it would jeopardize the judging process,” says Dr. Robert Epstein, Director Emeritus, Cambridge Center for Behavioral Studies, who is coordinating planning for the event.

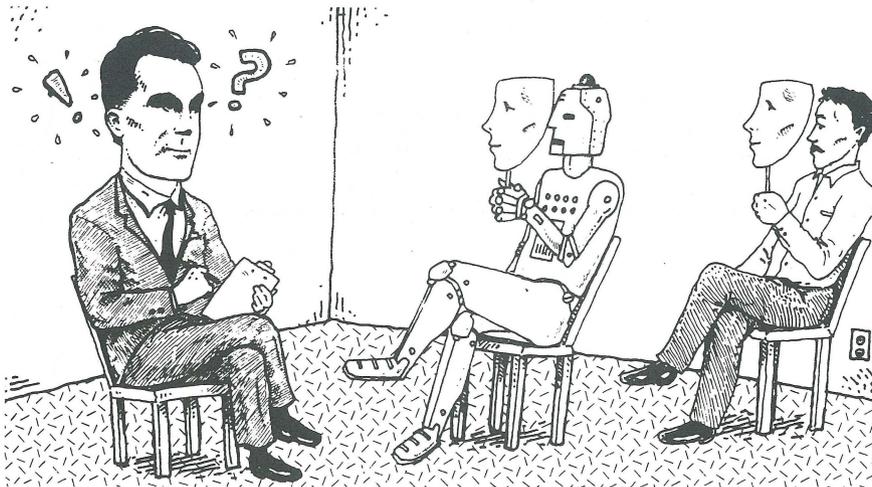


Illustration by Joseph Deiken

Turing creates a standard test to answer: Can Machines Think?

Continued on P. 2

Thank You, California!

In April 1990, when the West Coast Team captured the Computer Bowl, the Museum's Bowl management staff and the East Coast Team prepared to move West for the 1991 Bowl.

Bowl Project Manager Kate Jose was skeptical. How could she manage—from across the country—a labor-intensive spectacle such as The Computer Bowl® that involved a live televised event, a cocktail party, and a sit-down dinner for 500?

Starting in October with a fun-filled Bowl preview party hosted by Patrick and Nancy Forster of Hillsborough, California, enthusiasm spread until we had a dedicated team of volunteers in Silicon Valley. It was this team who really made The Third Annual Computer Bowl such a tremendous success.

With help from Debi Coleman and Peter Hirshberg, Apple Computer signed on as an Underwriter with responsibility for creating the set and the scoreboard. Kelli Richards coordinated Apple's volunteer team. Claudia Mazzetti from the American Association for Artificial Intelligence agreed to supervise the logistics of using the San Jose Convention Center (a piece of cake compared to planning AAAI's annual convention). Linda Lawrence, Kathy Sulgit, and Lisa Quinones worked on making it a great party.

By mid-winter, Terrylynn Pearson of Cunningham Communication, Inc., had signed on to coordinate West Coast public relations. Then Digital Equipment Corporation's Western Research Lab in Palo Alto provided the Museum space and a phone number for its West Coast Bowl headquarters.

When I arrived in California three days before the event, everything was running smoothly. The staff appeared busy but calm. It is our good fortune that Gwen Bell, National Chair of the Bowl, leads a bi-coastal life. She and our West Coast volunteers really helped us pull off the best Bowl ever! Without the extraordinary efforts of many West Coast friends, this major event could never have happened. We will be forever grateful for their help.

Oliver Strimpel
 Dr. Oliver Strimpel
 Executive Director

Photograph: Joe Czop



"The Computer Bowl" is held by John White, President of the ACM, and Bowl National Chair Gwen Bell. The Association for Computing Machinery will be the Presenter of the Bowl through The 1994 Super Computer Bowl.

During the Pre-Game Warm-up, co-hosts Chris Morgan and Peter Hirshberg listen to an answer from the East Coast MVPs. They are: Bob Frankston (1990), Slate Company, and Mitchell Kapor (1988), ON Technology, Inc. They face West Coast MVPs Bill Gates (1990), Microsoft Corp., and Bill Joy (1988), Sun Microsystems (not in photo).



Photograph: Joe Czop

Turing (continued from P. 1)

Other committee members include: Dr. Daniel Dennett, Chair, Distinguished Professor of Arts and Sciences and Director of Cognitive Studies, Tufts University; Dr. Harry Lewis, Gordon McKay Professor of Computer Science, Harvard University; Dr. H. McIlvaine Parsons, Senior Research Scientist, HumRRO; Dr. W.V. Quine, Edgar Pierce Professor of Philosophy Emeritus,

Harvard University; Dr. Joseph Weizenbaum, Professor of Computer Science Emeritus, MIT. Dr. Loebner and Dr. Allen Newell, U.A. and Helen Whitaker University Professor of Computer Science at Carnegie-Mellon University, are serving as advisors, along with Dr. I. B. Cohen, Victor S. Thomas Professor of the History of Science Emeritus, Harvard University. Dr. Cohen

was Committee Chair during the first year of planning.

The Museum will create an interactive exhibit based on conversations of the winning computer program. The Loebner Prize has already attracted the attention of CBS News, PBS, and *The Wall Street Journal*, which said, "After the first running of the Loebner classic this fall, the AI game will never be the same."

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Explore the Past on Video

The largest single assortment of videos on the history of computing will be available to the public in "PEOPLE AND COMPUTERS: Milestones of a Revolution." State of the art interactive video technology and an extensive list of film and video developed by interactive video specialist Brad Larson have made this possible.

This highly interactive, \$1 million exhibition on the evolution and impact of the computer opened June 29, 1991. It features nine milestones with life-size recreations of computing environments from the past.

The first eight milestones are enriched by over 70 clips from early, classic films and videos stored on three video discs. Several IBM PS/2s with M-motion boards allow visitors to interact with the discs, sampling representative videos of the people, technology, and culture from the 1930s through the 1980s.

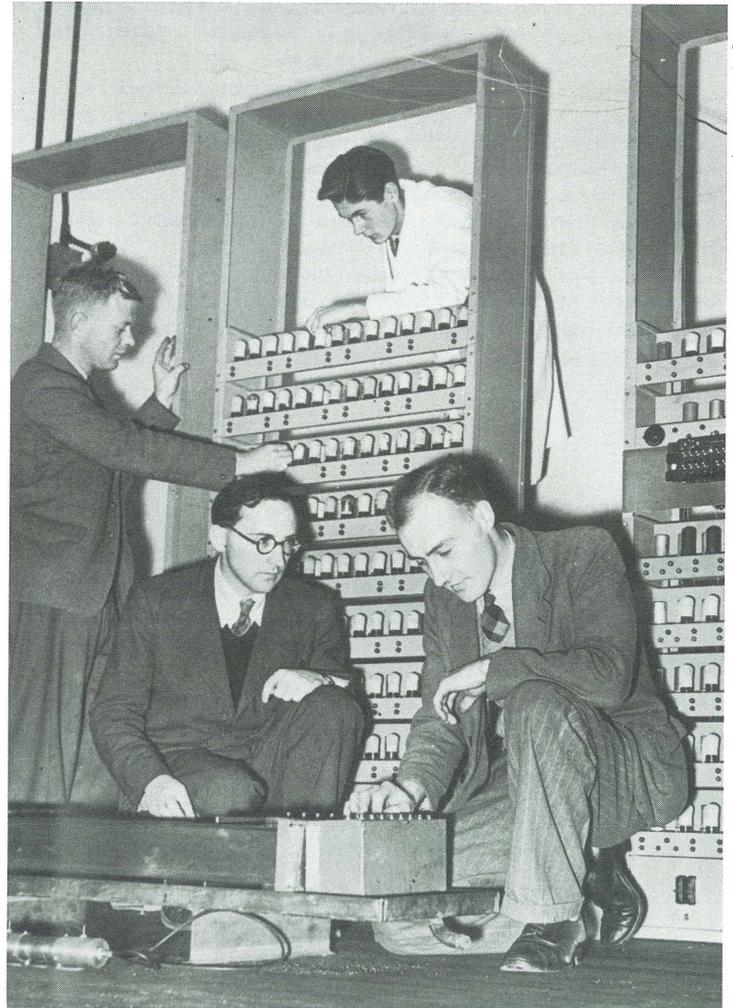
Eight stations let visitors select from three categories: "Popular Culture," "People," or "Technologies." "Popular Culture" brings back movies and video from each era. For the late 1930s, the choices include a segment from the movie, *Metropolis*, and a film of the 1939 World's Fair. For the 1970s, popular TV programs and movies are featured.

Selecting "People" allows visitors to meet and see both the "milestone makers" and people affected by the innovations. For the late 1940s, a period of invention, there is actual footage from computer pioneers Presper Eckert and John Mauchly, who conceived the ENIAC, Maurice Wilkes, creator of the EDSAC, and other inventors. For the late 1970s, visitors can view a clip of the linotype operators at the *New York Times*, as they shift to becoming computer operators.

Choosing "Technologies" provides a variety of views of computers at work. Video clips from the 1950s show people serving the machines that worked round the clock, while TV ads from the 1980s tout the personal computer.

During the last year, Brad Larson, whom The Computer Museum shares with The Children's Museum, has reviewed hundreds of different films and videos. He then edited the selections to provide the essence in a few minutes.

Throughout the project, Larson was assisted by the staff of the upcoming PBS TV series, *The Machine That Changed the World*, without whose efforts such a broad display would not have been possible.



Computer pioneer Maurice Wilkes (wearing glasses) and his team are seen with the EDSAC computer ca. 1950.

Photograph: The Computer Museum Collection



Choosing "People" at the interactive videodisc lets visitors meet early programmer, Rear Admiral Grace Hopper, pictured here with Howard Aiken, inventor of the Harvard Mark I.

Photograph: The Computer Museum Collection

The 1991 Computer Bowl

The East Coast unseated the West as "Computer Masters of the Universe" in The Third Annual Computer Bowl®, April 26, 1991, at the San Jose Convention Center. The score was 460 to 170.

The Computer Bowl trophy now heads back East until April 24, 1992, when The Fourth Annual Computer Bowl is played in Boston. In 1994 The Super Computer Bowl will be played by the Most Valuable Players (the highest point scorers) of the five previous Bowls. The 1991 Bowl was beamed live by satellite to the Museum in Boston and the University of Washington, Seattle. The award-winning TV show *Computer Chronicles* aired the Bowl nationwide on PBS in two parts in May.

A one-of-a-kind fundraising event for the Museum's educational programs, the Bowl has raised \$1.6 million in cash, products and services since 1988. It attracts the support of hundreds of sponsors and volunteers, as well as media coverage around the world.



West Coast Team Captain Heidi Roizen assembles her team before the Bowl during the High Tech Tailgate Party. They are from the left: Dave Liddle, President and CEO, Metaphor Computer Systems; David House, President, Microcomputer Component Group, Intel Corporation; Roizen, President and CEO, T/Maker Company; Ed Juge, Director of Market Planning for Radio Shack, a division of Tandy Corporation; Philippe Kahn, President, Borland International.



Here come the judges! International Data Group Chairman Pat McGovern (left) and venture capitalist John Doerr of Kleiner Perkins Caufield and Byers (Team Captains of the 1990 Bowl). Said McGovern before the 1991 Bowl, "As last year's East Coast Captain, I experienced the perils of leading a defending team in a battle of wits against the scheming, intimidating West Coast challengers. This year, as a judge, I will have the opportunity to see that justice is done and that the true masters of The Computer Bowl will win."



A rehearsal gave Computer Chronicles Executive Producer, Stewart Cheifet (far left), and Microsoft Chairman Bill Gates (second from left), the Bowl "Examiner," the opportunity to try out the new West Coast set, produced by Paul Segal, Dave Billmaier, and a team from Apple Computer, Underwriter of the 1991 Bowl. Behind Gates from the left: David House and Dave Liddle.



West Coast Team Captain Heidi Roizen and David House applaud teammate Dave Liddle. With seven correct answers (excluding bonus rounds), Liddle became the West's MVP.

Photographs: Joe Czop



West Coast Team Captain Heidi Roizen hits the buzzer, while Bowl host Stewart Cheifet and "Examiner" Bill Gates look on. (Both Cheifet and Gates stand with Gates on the right.)



East Coast Team Captain Pamela McCorduck, author of seven books including *Machines Who Think*, answered 10 questions correctly (excluding bonus rounds) to become the East's MVP.

14D Saturday, April 27, 1991 ■ San Jose Mercury News

No contest: Home team loses Computer Bowl

The empire strikes back

East crushes West in Computer Bowl

The headlines above ran in the San Jose Mercury News the morning after the Bowl.



East Coast Team Captain Pamela McCorduck hoists the Computer Bowl trophy after she and her team trounced the West Coast 460-170. West Coast MVP Dave Liddle said he was thinking of suing the East Coast team for having the "look and feel of the West."

The East Coast Team included (from the left): John Armstrong, Vice President, Science and Technology, International Business Machines Corporation; McCorduck; Samuel Fuller, Vice President, Research, Digital Equipment Corporation; James E. Clark, High Performance and Fault Tolerant Systems Vice President, AT&T Computer Systems; John Markoff, Technology Writer, the New York Times.

TOP 10 QUESTIONS FROM THE 1991 COMPUTER BOWL. CHECK YOUR OWN TECHNICAL I.Q.!

- 1) Remington Rand sponsored a 1950s TV quiz show. Was the name of that show I've Got A Secret, What's My Line or Beat The Clock?
- 2) Of the following Silicon Valley Companies, which did not start in a garage: Apple, Hewlett-Packard, Televideo or Sun?
- 3) In October 1981, Steve Jobs appeared on the cover of Inc. Magazine? In that photo, was he wearing a T-shirt, a bathing suit or a shirt and jacket?
- 4) Which company conducted business in tents, following the 1989 California earthquake: Apple, Borland, Sun or Tandem?
- 5) What was IBM's code name for the PC Junior?
- 6) In the 1959 movie *Desk Set*, Katharine Hepburn and her staff are worried that they might be replaced by a computer installed by Spencer Tracy. Was the machine called the EMORAC, the CALLA LILLY I or the UNIVAC?
- 7) Who invented the mouse?
- 8) Name three computer companies with the word "Packard" in their names.
- 9) Digital Research Incorporated is often referred to as D-R-I. But in fact when it was first formed it was called I-D-R. What did the letters stand for?
- 10) In the book *Digital Deli*, we learn that famous computer pioneer Charles Babbage also tried his hand at other inventions. Which of the following did he try to invent: a portable steam engine, a cotton candy machine or shoes for walking on water?

Answers

- 1) Sun; 2) I've Got A Secret; 3) No, he wore a shirt and jacket; 4) Borland; 5) PC Junior; 6) EMORAC; 7) Doug Engelbart; 8) Hewlett-Packard, Packard-Bell, and Ferranti-Packard; 9) Intergalactic Digital Research; 10) Shoes for walking on water.

Call For Volunteers!

The Computer Museum and The Boston Computer Society are jointly developing a major exhibition on personal computer applications opening in June 1992. The Museum now seeks volunteers to help create interactive programs that will give people hands-on experiences with the applications.

The exhibition will invite people to explore everything from word-processing, graphics, project planners and spreadsheets to games, virus protection, desktop publishing and multimedia production. Visitors will be able to raise their own questions and fears about computers, and watch video presentations of people who use computers daily in their work or play.

There will be more than 30 computer interactives which will consist of either modified commercial software or programs built from scratch. Many of the interactives will become part of the Exhibit Kits Program, which re-creates the Museum's most popular and effective exhibits and distributes them to museums and science centers around the world.



Photograph: Ted Groves

Make Exhibit Developer David Greschler happy! Volunteer to design interactives for the new exhibition on personal computer applications.

If you are interested in educational software design or just like to program, and would like to volunteer, call Exhibit Developer David Greschler at (617)426-2800 ext. 349.

Education

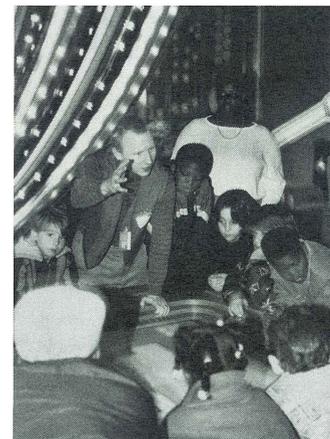
What's New To Do

The Museum now offers a greater variety of regularly scheduled activities and demonstrations to groups and other visitors. For example, colorful activity cards, designed by the Education staff, invite visitors to explore interactive exhibits in the Image Gallery. One card asks them to "Change the World" at the Color By Number exhibit. Other cards invite them to create their own snowflakes and colorize images of their own faces.

In addition, around The Walk-Through Computer™, visitors can go on a tour, hunt for giant versions of actual computer parts or dissect a personal computer and talk about

what's inside. There are also demonstrations of the Hollerith Tabulating Machine and the Museum's toy robot collection. School groups are especially pleased with the additional hands-on activities.

Look for more activities this summer with the opening of PEOPLE AND COMPUTERS, including the computer "time capsule."



Photograph: Ted Groves

Visitor Assistant Tim Granlund (wearing vest) gives students a tour of The Walk-Through Computer.

Collections

Help Make History!

The photo at the right shows Eldon Hall testing an Apollo Guidance Computer in the early 1960s. Hall has donated a variety of materials documenting the creation of this first computer to use integrated circuits. These materials include films that depict how the chips were manufactured, memos and bills that document the fluctuating cost and availability of the new technology, and prototypes providing evidence of the evolution of the final design.

The Collections Department needs your help in finding and preserving similar documentation: footage of people designing, building, and using computers; photographs of people and projects, even videos of that wild product announcement party. Please send a brief listing of materials you uncover to the Collections Department.



Photograph: The Computer Museum Collection

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Upcoming Events

Events

Thursday, July 4-Sunday, July 7, 1991: 11am-4pm

Computer Animation Festival

The latest computer animation from around the world. Highlights include animation dramatizing Yellowstone National Park's forest fires, Karl Sims' "Panspermia," and "Visualizing Fermat's Last Theorem," an equation simulation. Shows hourly. Free with Museum admission.

Exhibits

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PEOPLE AND COMPUTERS: Milestones of a Revolution

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Starting September 1, 1991:

Nine of the Museum's most popular and effective interactive exhibits will be available as affordable kits to museums and science centers around the world. Kits include "How Tall Are You?," which measures height using ultrasonic squeaks, "Eliza, the Computer Psychologist," and "Color the States," which recognizes speech. For more information, call (617)426-2800 ext. 396.

From the Store

In September

Watch for the Educators Catalog

The Museum's newest catalog features *HOW COMPUTERS WORK: A Journey Into The Walk-Through Computer* and other videos, slide sets, books, kits and software for educators of all levels. For more details, call the Museum Store (617) 426-2800 ext. 307.

Please Note: Summer hours start Monday, July 1, 1991. The Computer Museum will be open daily 10am to 6pm/Fridays until 9pm.

SUMMER: Open daily 10am-6pm, Fridays until 9pm.

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ADMISSION: Adults \$6.00, students and seniors \$5.00. Half price Saturday 10am-noon. Free to Museum Members and children under five. For more information on exhibits or special events, call our talking computer at (617) 423-6758.

To Join:

Members get free admission for one year; The Computer Museum *NEWS*, a quarterly 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.

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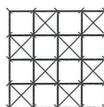
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