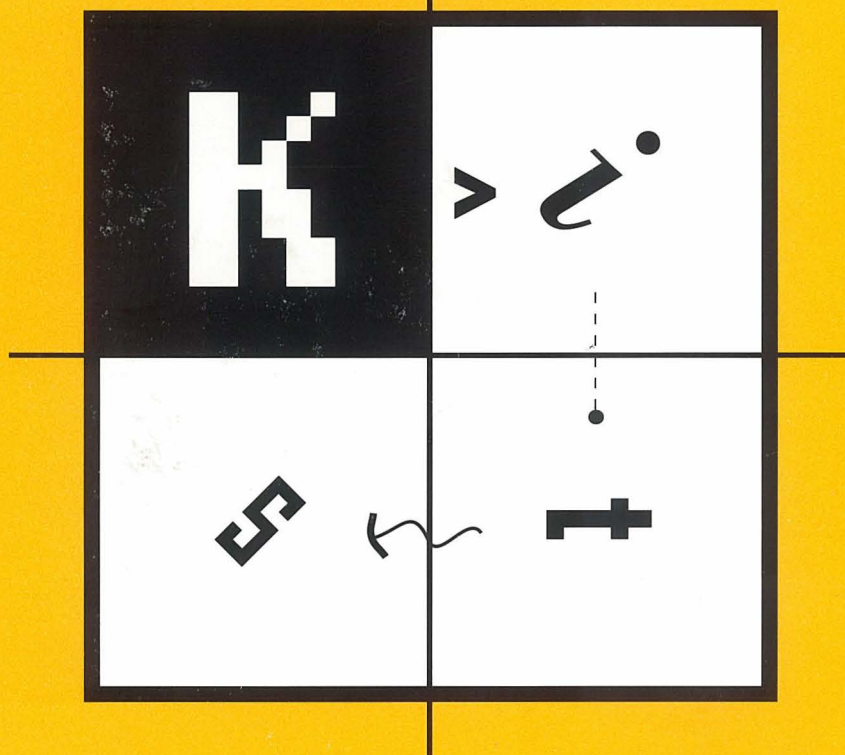EXHIBIT

K i
s t

The Computer Museum

The Computer Museum's Exhibit Kits

The Computer Museum's Exhibit Kits are "plug and play" exhibits that include software, supporting documentation, and suggestions for exhibit layout and signage. Some Kits also include specialized hardware. The Exhibit Kits have been extensively evaluated and refined in The Computer Museum's exhibit halls to ensure that visitors understand the point of the exhibit and have fun in the process. Development of The Computer Museum's Exhibit Kits was supported in part by the National Science Foundation.

TOOLS & TOYS: THE AMAZING PERSONAL COMPUTER

Design Your Own Newsletter*
DESKTOP PUBLISHING

Learn the basics of desktop publishing while designing a newsletter. Then print out the design to take home.

DinoDraw!
COMPUTER DRAWING

Use basic computer drawing tools to manipulate a dinosaur image. Then print out the drawing to take home.

Explosive Experiments
CHEMISTRY/EARTH SCIENCE

Safely experiment with dangerous chemical reactions by viewing them with a videodisk. Watch an explosion in slow motion or even run it backwards!

Fly a DC-10
FLIGHT SIMULATION

Discover how computers can simulate flight. Soar the skies in a computer simulated DC-10.

Make Your Own Cartoon
COMPUTER-ASSISTED ANIMATION

Find out how computer-assisted animation works by creating a short cartoon using three animated characters.

Alphabet Noodle Soup*
WORD PUZZLE

Choose a word in English or Spanish and use its letters to see how many new words can be made.

Special Effects*
IMAGE PROCESSING

Experience being covered in liquid metal or dancing in a rainbow of colors. Try different image-processing effects on your own moving picture. Discover how meteorologists give weather reports by projecting computer images behind them.

Spend a Million Dollars*
COMPUTER SPREADSHEETS

Learn how spreadsheets work by "spending" a million dollars.

What's Your Type?
PUBLISHING TOOLS

Explore how computers create typefaces. Samples, including Braille and Egyptian hieroglyphics, can be printed to take home.
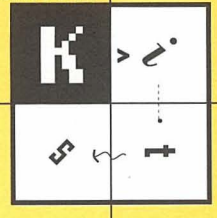
* AVAILABLE IN SPANISH

ROBOTS & OTHER SMART MACHINES

Color The States
SPEECH RECOGNITION

This program obeys your spoken commands to paint a map of the U.S. Follow its rules to ensure bordering states are not the same color.

Eliza:
The Computer Psychologist*
COMPUTER INTELLIGENCE

An introduction to computer-based response. Eliza's questions coax you to talk about yourself.

Haggle With a Computer
Fruit Vendor
EXPERT SYSTEMS

Bargain with a computer-simulated fruit vendor over the price of a box of strawberries.

How Computers Play Games
DECISION MAKING

Challenge a computer to a game of "5 in-a row." Observe as the computer contemplates its next move.

How Tall Are You?*
ULTRASONIC MEASUREMENT

Let a computer measure your height. The computer may respond with humor, or purposely make a mistake and correct itself. Users of all ages delight in fooling the computer.

The Talking Computer
COMPUTER SPEECH

This exhibit reads what you type, and allows you to change the computer's voice.

PEOPLE AND COMPUTERS: MILESTONES OF A REVOLUTION

How Fast Are Computers?*
COMPUTER SPEED

Compare your own computation speed to that of computers. Find out how long it takes a person or a computer to update a global weather forecast.

Maze Programming*
COMPUTER PROGRAMMING

Learn the basics of programming by instructing an animated robot car to navigate through a maze.

VIRTUAL WORLDS

Electronic Mail to
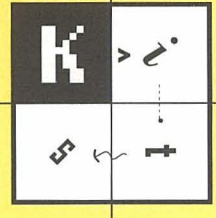**The White House**
ELECTRONIC MESSAGING

Learn about electronic mail and communications through an interactive multi-media presentation. Send electronic mail to the White House through an on-line connection such as the Internet.

The Virtual Reality Chair
VIRTUAL REALITY

An unassisted system for viewing virtual reality. Experience playing in a virtual field, or walk through a virtual house.

***AVAILABLE IN SPANISH**

Letter To The White House

ELECTRONIC MAIL

Exhibit Description:

This multi-media exhibit describes the use of electronic communications, and Electronic Democracy in today's society. Visitors learn about electronic mail, Electronic Democracy, and can write and send an electronic message to President Clinton or Vice President Gore.

Visitors Will Learn:

♦ History of electronic communications in the White House
♦ What electronic mail is and how it is used
♦ How Electronic Democracy is effecting society
♦ How to write and actually send electronic mail to the White House

This Kit Includes:

♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Suggestions for exhibit signage, furnishings, and layout

The Customer Must Provide:

♦ Apple Macintosh Quadra 650 or higher with at least 16 MB RAM and an 80 MB or larger hard disk
♦ System 7.0 or higher
♦ Color 16" (or larger) monitor
♦ Apple compatible keyboard
♦ Apple compatible mouse
♦ Link to electronic mail service (Internet, Compuserve, Prodigy)
♦ Signs, enclosure, other site-specific materials

Site Requirements:

The exhibit site needs to be set up to provide power for the computer, and to allow visitor access to the computer monitor, mouse and keyboard. A telephone or network line needs to be installed to connect the exhibit to an electronic mail service.
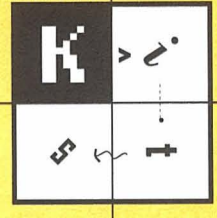
Design Your Own Newsletter
DESKTOP PUBLISHING

Exhibit Description:
Visitors experience how graphic design software helps people create intricate and attractive documents. Users can design the layout of a newsletter by choosing the number of columns, the size and number of headlines, the location of articles, and the placement of images. Visitors can print out their newsletter and take it home as a souvenir. Newsletter text can be customized to include information about the sponsoring museum or science center.

Visitors Will Learn:
♦ Basic desktop publishing terminology
♦ How to create an attractive document
♦ How a computer can assist in the design of a page

This Kit Includes:
♦ Complete software and licensing
♦ Kit installation and maintenance manual
♦ Suggestions for exhibit layout and signage
♦ Customized newsletter text that references your institution

The Customer Must Provide:
♦ Apple Macintosh Quadra 605 or higher, with at least 8 MB of RAM, and a 40 MB or larger hard disk
♦ System 7.0 or higher
♦ Radius Pivot Monitor (monochrome)
♦ Macintosh compatible laser printer (optional)
♦ Signs, enclosure, and other site-specific materials

Installation Requirements:
The exhibit site needs to be set up to provide power for the computer, monitor and laser printer (optional). Visitors need access to the computer's mouse and monitor.
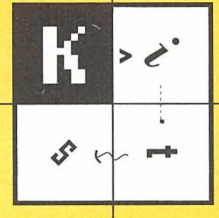
* This Kit is Available in Spanish
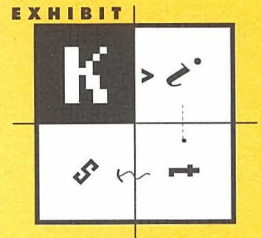
DinoDraw!
COMPUTER DRAWING

Exhibit Description:

DinoDraw! shows visitors how computers can be used as drawing tools. Visitors are led through the process of using electronic versions of familiar drawing tools: pens, an eraser, and a compass to make circles. There are also tools which are unique to drawing programs: instant enlargers, rotators, and finely controlled spray paint.

Visitors begin by adding features to a pre-drawn dinosaur. Once they become proficient with the drawing tools, they can add to (or subtract from) a selection of pre-drawn images or create entirely new drawings. The program allows visitors to print the drawings they create, giving them a personal souvenir of their visit.

Visitors Will Learn:

♦ How basic computer drawing tools let them create an image in just a few minutes
♦ How creative inspiration comes from the artist, not the computer
♦ Basic vocabulary for computer drawing

This Kit Includes:

♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Suggestions for exhibit layout and signage

The Customer Must Provide:

♦ Apple Macintosh LCIII with 8 MB of RAM , and a 40 MB or larger hard disk
♦ System 7.0 or higher
♦ 13" monitor
♦ Apple compatible mouse or trackball
♦ Macintosh compatible laser printer (optional)
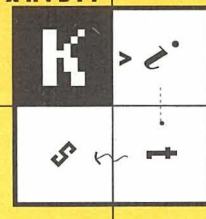♦ Signs, enclosure, and other site-specific materials

Site Requirements:

The exhibit site needs to be set up to provide power for the computer (and optional printer). Visitors need access to the computer monitor and mouse (and optional printer)

Explosive Experiments
CHEMISTRY/EARTH SCIENCE

Exhibit Description:
Explosive Experiments allows users to control videos showing a variety of dangerous chemical reactions. Visitors use a computer to manipulate a videodisk (developed by the American Chemical Society) which displays 22 different chemical reactions. The chemical formula for each reaction is displayed on the computer screen while the reaction is displayed on a separate video monitor. The computer menu allows the visitor to replay the video, in slow motion, or in reverse without the risk of injury or the release of toxic substances.

Visitors Will Learn:
- What happens in 22 dangerous chemical experiments
- How a computer is used to control a video disk system

This Kit Includes:
- Complete software and licensing
- Kit Installation and Maintenance Manual
- Suggestions for exhibit layout and signage
- One Redox videodisk (by the American Chemical Society)

The Customer Must Provide:
- Macintosh Quadra 605 or higher with 8 MB RAM and a 40 MB hard disk.
- System 7.0 or higher
- Apple compatible mouse
- 13" computer monitor
- RS232 cable
- Videodisk player with communications port (i.e. Pioneer LVD4800)
- 18" or larger TV monitor (NTSC standard)
- Signs, enclosure, and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer, computer monitor, videodisk player, and NTSC monitor. Visitors need access to the computer monitor, TV monitor and mouse.
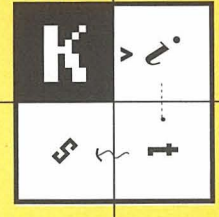
Make Your Own Cartoon
COMPUTER-ASSISTED ANIMATION

Exhibit Description:
This exhibit shows visitors how computers can be used to create cartoons. High-quality animation and digitized sound give visitors the thrill of making a professional-quality animation in just a few minutes. Visitors are first led through the process of making simple one-step cartoons involving a frog in a pond, controlling where the frog moves and what it looks like. Then, once they have mastered the process, they create new cartoons with a bird, a frog and a fly. Once the cartoons are created, the visitors can view them in their entirety.

The Visitor Will Learn:
◆ The steps involved in creating a computer animation
◆ How inspiration comes from the artist, not the computer

The Kit includes:
◆ Complete software and licensing
◆ Kit Installation and Maintenance Manual
◆ Suggestions for exhibit layout and signage

The Customer Must Provide:
◆ Apple Macintosh Quadra 605 with 12 MB of RAM, and a 40 MB or larger hard disk
◆ System 7.0 or higher
◆ Radius Color Pivot monitor (624 pixels wide by 832 pixels tall)
◆ Apple compatible mouse.
◆ Optional speakers (the Mac's internal speaker may be used)
◆ Signs, enclosure, and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer. Visitors need access to the computer monitor and mouse.
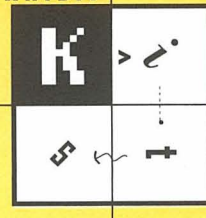
Alphabet Noodle Soup
WORD PUZZLES

Exhibit Description
In this exhibit, visitors choose a word in English or Spanish and use its letters to see how many new words can be made. The computer lets the user know how many words can be produced, and will give hints about the words upon request. The computer provides instant feedback with each entry, and tracks the game's progress.

What Visitors Will Learn:
♦ Possible words derived from the letters in one word
♦ How computers are used to store game information and solutions

This Kit Includes:
♦ Complete software and licensing
♦ Kit installation and maintenance manual
♦ Suggestions for exhibit layout and signage

The Customer Must Provide:
♦ 486 PC compatible (ISA) or PS/2 computer with at least 8 MB of RAM, and a 40 MB or larger hard disk
♦ DOS 5.0 or higher and Windows 3.0 or higher
♦ 13" VGA monitor
♦ Microsoft or compatible mouse.
♦ Signs, enclosures, and other site-specific materials

Site Requirements:
The exhibit needs to be set up to provide power for the computer and monitor. Visitors need access to the computer mouse, keyboard and monitor.

This Kit is Available in Spanish

Special Effects
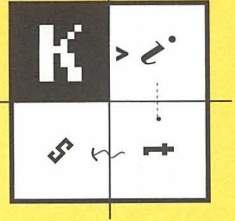## IMAGE PROCESSING

Exhibit Description:
This exhibit demonstrates how computers are used in film and video to create special effects. Visitors stand in front of a white screen and choose one of several effects options from the keyboard. While the computer processes the effect, the monitor displays an explanation of how computers and video work together to create these effects. The monitor then displays the combined image/effect. Some effects, such as "Meteorologist," combine the visitor's image with a background image of a weather map. Others, such as "Liquid Metal," distort the visitor's image or change it radically.

Visitors Will Learn:
◆ How effects are used in practical applications
◆ How the computers and video work together
◆ How meteorologists give weather reports with changing maps behind them

This Kit Includes:
◆ Complete software and licensing
◆ Kit installation and maintenance manual
◆ Suggestions for exhibit layout and signage

The Customer Must Provide:
◆ Commodore Amiga 2000HD with at least 8 MB of RAM, and a 100 MB or larger hard disk
◆ Video Toaster video board
◆ NTSC video camera
◆ Large NTSC video monitor
◆ Speakers and amplifier (optionally, the computer's internal speaker may be used)
◆ Signs, enclosures, and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer, video monitor, and video camera. Visitors need access to the computer keyboard.

* This Kit is Available in Spanish

Fly a DC-10
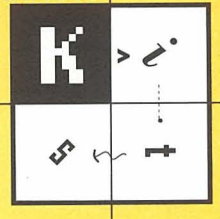## FLIGHT SIMULATION

Exhibit Description:
Visitors are invited to fly a simulated DC-10 from take-off to landing. Participants can view the simulation from the pilot's seat or control tower, and from behind the plane. Visitors can also control the simulated weather. This exhibit is adapted for public use from one of the top commercial computer flight simulators. As pilots, visitors find the plane markedly responsive to their commands. They can explore an island and even fly through an erupting volcano.

The Visitor Will Learn:
♦ How simulations are used in training and dangerous situations
♦ How a computer can generate an artificial reality
♦ What it is like to fly in a simulated environment

This Kit Includes:
♦ Complete software and licensing
♦ Kit installation and maintenance manual
♦ Suggestions for exhibit layout and signage

The Customer Must Provide:
♦ Apple Macintosh Quadra 610 or higher (running System 7.0 or higher), with at least 12 MB RAM, a 40 MB or larger hard disk and 1 MB of VRAM
♦ System 7.0 or higher
♦ Mouse or Joystick
♦ 20" computer monitor (may require a video card)
♦ Stereo speakers
♦ Signs, enclosures and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer and monitor. Visitors need access to the computer monitor and mouse/joystick.

Spend a Million Dollars!
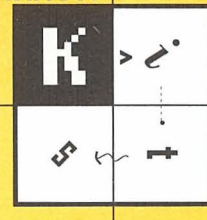## COMPUTER SPREADSHEETS

Exhibit Description:
This graphically captivating exhibit introduces visitors to spreadsheets and their uses by inviting them to spend a million dollars and track their purchases on a spreadsheet. The visitor must first account for taxes taken from the $1 million, then make purchases from several categories using the on-screen menu of choices. As visitors purchase mansions, sports cars, trips, even computers, or donate to charity, the spreadsheet keeps track of their expenses and how much they have left to spend. Visitors can also compare their spending habits to those of other visitors who have used the exhibit. The spreadsheet automatically creates pie charts illustrating how the visitor's purchases compare to other's.

Visitors Will Learn:
♦ How a spreadsheet is used to organize and calculate financial information
♦ Examples of spreadsheets

This Kit Includes:
♦ Complete software and licensing
♦ Kit installation and maintenance manual
♦ Suggestions for exhibit layout and signage

The Customer Must Provide:
♦ 386 or higher PC compatible (ISA) or PS/2 computer with at least 8 MB RAM and a 40 MB hard disk
♦ DOS 5.0 or higher and Windows 3.0 or higher
♦ Microsoft compatible mouse
♦ 13" VGA monitor
♦ Signs, enclosures, and other site-specific materials

Installation Requirements:
The exhibit site needs to be set up to provide power for the computer and monitor. Visitors need access to the computer monitor and mouse.

* This Kit is Available in Spanish

What's Your Type?
PUBLISHING TOOLS

Exhibit Description:
This exhibit encourages visitors to learn about the use of typefaces in traditional printing and in electronic publishing. Visitors write their name (or any other message) in Egyptian Hieroglyphics or Braille. Visitors can print their work and bring it home as a souvenir.

Visitors Will Learn:
♦ How typefaces are used in traditional and electronic printing
♦ What a message looks like in Hieroglyphics
♦ What a message feels like in Braille

This Kit Includes:
♦ Complete software and licensing
♦ Kit installation and maintenance manual
♦ Suggestions for exhibit layout and signage

The Customer Must Provide:
♦ Apple Macintosh Quadra 605 with at least 8 MB RAM, and a 40 MB or larger hard drive
♦ System 7.0 or higher
♦ 13" Apple compatible monitor
♦ Mouse or trackball
♦ Macintosh compatible laser printer (optional)
♦ Braille Blazer printer (optional)
♦ Signs, enclosures, and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer and printers (optional). Visitors need access to the computer monitor, keyboard, mouse and printers.
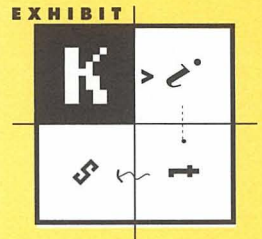
Color the States
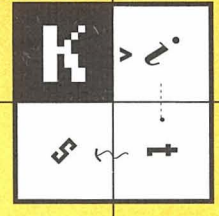## SPEECH RECOGNITION

Exhibit Description:
Visitors are invited to color in a map of the United States using only four colors so that no two states with the same color share a common border. The only input device is a microphone - all commands are given by speech. Visitors first select a state and then select its color. There are many different ways to color the states successfully, but also many ways to be trapped into coloring two adjacent states the same.

Visitors Will Learn:
♦ Speech recognition allows computers to obey spoken instructions
♦ If the vocabulary is small, a computer can recognize the instructions of any speaker without any prior "training" with that speaker (Speech recognition is imperfect)
♦ Visitors quickly get used to controlling the computer by spoken commands
♦ Speech recognition allows the disabled, or people who must use their hands for other tasks, to operate computers

This Kit Includes:
♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Dragon Systems Speech Recognition board
♦ Suggestions for exhibit signage and layout

The Customer Must Provide:
♦ PC-AT compatible computer, with at least 256 KB of RAM, and a 20 MB or larger hard disk
♦ DOS 3.3 or higher
♦ Color VGA monitor
♦ Microphone and mount
♦ Signs, enclosure, other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer and to allow visitor access to the microphone and the computer monitor.

Eliza: The Computer Psychologist
COMPUTER INTELLIGENCE

Exhibit Description:

This exhibit is an implementation of a classic program developed by Joseph Weizenbaum at MIT in 1966. In offering to help the visitor with a problem, the program plays the role of a psychotherapist. The visitor types in a sentence, and the program responds by using one of a small repertoire of expedients. Examples include turning a statement into a question, responding to a key word such as "family," or simply asking the "patient" to elaborate. ELIZA's methods become quite apparent after a short interchange, and visitors can then trick ELIZA into repeating itself or asking nonsensical questions.

Visitors Will Learn:

♦ Computer programs can simulate human conversations
♦ Simple devices can trick you into believing a computer is intelligent when, in fact, it is simply reflecting your own words back at you
♦ There is a world of difference between a simple program, such as ELIZA, and a truly intelligent program
♦ We are still a very long way from knowing how to build a program that converses like a person

This Kit Includes:

♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Suggestions for exhibit layout and signage
♦ Available in Spanish

The Customer Must Provide:

♦ PC-AT compatible computer, with at least 256 KB of RAM, and a 20 MB or larger hard disk
♦ DOS 3.3 or higher
♦ Color VGA monitor
♦ Keyboard
♦ Signs, enclosure, other site-specific materials

Site Requirements:

The exhibit site needs to be set up to provide power for the computer and to allow visitor access to the computer monitor and keyboard.

* This Kit is Available in Spanish
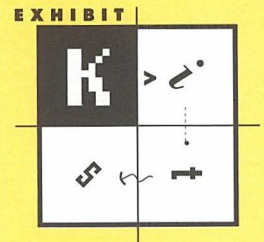
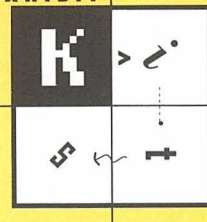# Haggle With a Computer Fruit Vendor

Expert Systems

Exhibit Description:

In this exhibit, visitors bargain with the computer over the price of a box of strawberries. First, visitors select one of three fruit vendors that range in sophistication from NOAH BUDGE (with only 10 bargaining rules) to NORA LOGICAL (with over a hundred bargaining rules). Visitors can type in offers for a box of strawberries, or make insulting or flattering remarks to the vendor. A display on the screen tracks the testing and firing of the rules as the computer generates a response. The computer may lower the price or return the abuse. A voice synthesizer allows the computer to reply audibly. The session ends when the computer and visitor close the deal or the visitor is "kicked out of the vendor's stall."

Visitors Will Learn:

- A computer can follow a set of rules, giving it surprisingly human-like behavior
- The more rules the computer has, the more sophisticated its behavior
- The computer cannot improvise or use common sense to respond outside its particular area of expertise
- Rule-based expert systems are growing in use, and are taking over some tasks formerly thought to require a human expert

This Kit Includes:

- Complete Software and Licensing
- Kit Installation and Maintenance Manual
- Custom cables
- Suggestions for exhibit layout and signage

The Customer Must Provide:

- PC-AT compatible computer with at least 256 KB of RAM, and a 20 MB or larger hard disk
- DOS 3.3 or later
- Color VGA display
- Keyboard.
- Single-line DECtalk unit with serial cable, part number DTC01-AA, supplied by Digital Equipment Corporation
- Signs, enclosure, other site-specific materials

Site Requirements:

The exhibit site needs to be set up to provide power for the computer, to allow visitor access to the computer's monitor and keyboard, and to hear the DECtalk's speech output.

How Computers Play Games
DECISION MAKING

Exhibit Description:
This exhibit allows visitors to challenge the computer to a game of five-in-a-row. During the game, the computer's "thought process" is shown graphically as it evaluates each possible move and selects the best one. Visitors observe how the computer applies its strategy in response to their moves. Visitors can also explore a more detailed explanation of each strategy.

Visitors Will Learn:
♦ Computers, by testing many moves rapidly, can compete with humans at certain tasks
♦ Computers can play games of strategy by using sets of simple rules to test many possible moves

This Kit Includes:
♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Suggestions for exhibit layout and signage

### The Customer Must Provide:
♦ A 486/25 MHz or faster PC compatible computer with at least 640 KB of RAM, and a 20 MB or larger hard disk
♦ DOS 3.3 or higher
♦ Color VGA display
♦ Microsoft-compatible mouse
♦ Keyboard.
♦ Signs, enclosure, other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer and to allow visitor access to the computer's monitor and mouse.
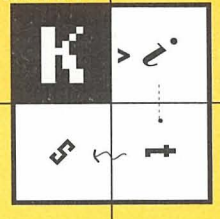
How Tall Are You?
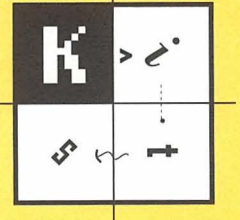## ULTRASONIC MEASUREMENT

Exhibit Description:
The exhibit invites visitors in its proximity to have their height measured. When visitors move into the correct position (marked by feet painted at the base of the exhibit), their height is measured using an ultrasonic distance sensor. The results are announced via digitized speech such as "You seem to be about five feet, six and three quarter inches." Occasionally the exhibit entertains visitors by making a "mistake" and then correcting itself. Visitors delight in trying to fool the computer.

Visitors Will Learn:
♦ Ultrasonic sensors allow computers to detect and measure the distance to objects in their environment
♦ The keyboard and screen are not the only way to interact with a computer. Visitors who try this exhibit provide input by moving their bodies and receive the output via synthesized speech
♦ Mobile robots can use ultrasonic sensors to find the distance to walls and obstacles around them

Variations:
This kit can be applied in other settings such as:
♦ Comparing visitors to other objects such as mountains, whales or small objects
♦ A practical demonstration of the Doppler effect
♦ An audible and interactive attraction to a larger exhibit

This Kit Includes:
♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Suggestions for exhibit layout and signage
♦ Ultrasonic distance sensors, cables and driving hardware

The Customer Must Provide:
♦ Apple Macintosh computer (SE or higher) with at least 20 MB of hard disk space and at least 4 MB of RAM
♦ System 7.0 or higher
♦ Speaker, amplifier and all audio cables (to connect to the Macintosh's 1/8" mini phono plug)
♦ Signs, enclosure, mounting points for distance sensors, and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer. Visitors have <u>no</u> access to the computer. The speaker and four distance sensors are easily mounted, as described in the *Kit Installation and Maintenance Manual.*

* This Kit is available in Spanish and in Metric units of height

The Talking Computer
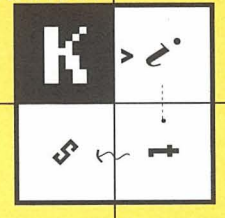## COMPUTER SPEECH

Exhibit Description:
The Talking Computer invites visitors to learn how a computer can speak and control the qualities of its voice. Visitors can experiment with the computer's diction by having it pronounce their name and other text they type. Visitors can also change the characteristics of the computer's voice. To illustrate one of the uses of voice output, the computer asks visitors to close their eyes and type while the computer reads to them what they have typed.

Visitors Will Learn:
♦ Computers can communicate with people by voice
♦ To synthesize speech, a computer must use a detailed set of rules to recognize words in written text and the sounds that combinations of letters spell
♦ Computer-generated speech is comprehensible but crude. It lacks the subtle inflections and accents important to human speech.
♦ Speech synthesis has many applications, including providing information over the phone and allowing the sight-impaired to use computers.

This Kit Includes:
♦ Complete software and licensing
♦ Kit Installation and Maintenance Manual
♦ Suggestions for exhibit layout and signage

The Customer Must Provide:
♦ Apple Macintosh LCIII (or higher) with 8 MB of RAM , and a 20 MB or larger hard disk
♦ System 7.0 or higher
♦ Apple compatible color monitor
♦ Apple compatible mouse
♦ Digital Equipment Corporation DTC-01 DECtalk text-to-speech converter
♦ Standard Macintosh modem cable (male 8-pin Mini-DIN to male DB-25)
♦ Signs, enclosure, and other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer. Visitors need access to the computer monitor and mouse, and must be able to hear the speech output from the DECtalk.
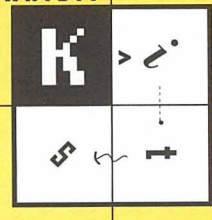
How Fast Are Computers?
COMPUTER SPEED

Exhibit Description:
The exhibit invites visitors to add five numbers, while the computer measures how long they take to arrive at the correct answer. It then displays how many similar calculations computers (from a PC to a supercomputer) could perform in the same amount of time. Visitors can then match any one of five computers (including themselves) to one of five tasks, ranging from balancing a checkbook to updating a global weather model. The program tells them how long the selected computer would take to solve the task. Many visitors will find that it would take them over 900 years to update the day's forecast!

Visitors Will Learn:
- Computers vary widely in their speed of calculation, but they are all much faster than people at numerical calculation
- Some tasks, such as adding a few numbers, take much less computing than other tasks, such as forecasting the weather
- It is important to choose a computer that is sufficiently powerful if a job is to be completed in a reasonable time
- The four standard ways of making computers run fast- parallel processing, RISC vs. CISC, fast clock speed, and pipelining

This Kit Includes:
- Complete software and licensing
- Kit Installation and Maintenance Manual
- Suggestions for exhibit signage and layout

The Customer Must Provide:
- PC-AT compatible computer, with at least 256 KB of RAM, and a 20 MB or larger hard disk
- DOS 3.3 or higher
- Color VGA display
- Keyboard
- Signs, enclosure, other site-specific materials

Site Requirements:
The exhibit site needs to be set up to provide power for the computer and to allow visitor access to the computer monitor and keyboard.
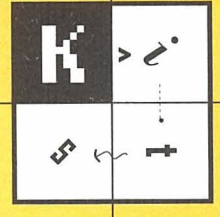
* This Kit is Available in Spanish

Maze Programming
COMPUTER PROGRAMMING

Exhibit Description:

This exhibit challenges visitors to write a computer program that instructs a robot car to move through a maze. It guides visitors through the task in simple, incremental steps, introducing them along the way to concepts fundamental to computer programming. After learning what each instruction does, visitors write their own programs, and then execute them. High-resolution color and 3D images engage visitors as they watch the car obey their commands. The car's movements give visitors immediate feedback and a firm grasp of how their program functions.

Visitors Will Learn:

◆ Computers perform tasks by following a list of instructions, called programs
◆ Each program instruction is simple and explicit
◆ Rudimentary programming is not conceptually difficult, but requires attention to detail

This Kit Includes:

◆ Complete software and licensing
◆ Kit Installation and Maintenance Manual
◆ Suggestions for exhibit layout and signage

The Customer Must Provide:

◆ Apple Macintosh LCIII (or higher) with 8 MB of RAM, and a 20 MB or larger hard disk
◆ System 7.0 or higher
◆ Apple compatible color monitor
◆ Apple compatible mouse.
◆ Signs, enclosure, and other site-specific materials

Site Requirements:

The exhibit site needs to be set up to provide power for the computer. Visitors need access to the computer monitor and mouse.

* This Kit is Available in Spanish

The Computer Museum
Selected Exhibit Kits
Customers

THE FRANKLIN INSTITUTE
Philadelphia, PA

THE NATIONAL HISTORY MUSEUM,
THE SMITHSONIAN INSTITUTION
Washington, D.C.

MUSEUM OF ART, SCIENCE & INDUSTRY
Bridgeport, CT

ST. LOUIS SCIENCE CENTER
St. Louis, MO

THE PACIFIC SCIENCE CENTER
Seattle, WA

EUREKA - THE CHILDREN'S MUSEUM
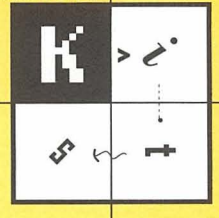Halifax, England

THE CHILDREN'S HANDS ON MUSEUM
Olympia, WA

CENTRO DE CIENCIAS DE SINALOA
Mexico

THE TECH MUSEUM OF INNOVATION
San Jose, CA
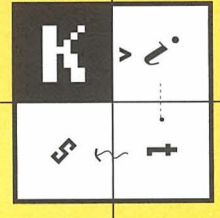
NATIONAL AQUARIUM
Baltimore, MD

The Computer Museum
Exhibit Kit Pricing
AS OF JANUARY 10, 1994

Exhibit Kits	Price	Platform	Spanish Version
TOOLS AND TOYS: THE AMAZING PERSONAL COMPUTER			
Alphabet Noodle Soup	$1,500	IBM	
Design a Newsletter	$1,500	MAC	yes
DinoDraw!	$1,500	MAC	
Draw on the Wall	$700	MAC	
Explosive Experiments	$1,700	MAC	
Fly a DC-10	$3,000	MAC	
Make Your Own Cartoon	$2,500	MAC	
Outline and Organize	$750	IBM	yes
Record Your Voice	$1,500	IBM	
Spend a Million Dollars	$2,000	IBM	yes
Star in Your Own Commercial	$3,200	MAC	
Special Effects (photo)	$4,000	Amiga	yes
Wedding Planner	$1,250	IBM	
What's Your Type?	$1,000	MAC	
ROBOTS AND OTHER SMART MACHINES			
Color The States	$3,900	IBM	
Eliza: The Computer Psychologist	$1,400	IBM	yes
Haggle with a Fruit Vendor	$3,575	IBM	
How Computers Play Games	$2,700	IBM	yes
How Tall Are You?	$5,400	MAC	yes
The Talking Computer	$1,500	MAC	
PEOPLE AND COMPUTERS			
How Fast Are Computers?	$1,500	IBM	yes
Journey of a Keypress	$2,000	MAC	
Maze Programming	$2,500	MAC	yes
VIRTUAL WORLDS			
Letter To The White House		MAC	