The
Computer
Museum

300 Congress Street
Boston, MA 02210
(617) 426-2800

Memorandum

to: **The Computer Museum Board of Directors**
from: Oliver Strimpel
re: Board meeting on June 22
date: 6/5/90

Please find attached the following materials relating to the upcoming Annual Meeting of The Computer Museum Board of Directors and Trustees:

- meeting agenda
- financial statement for the period July 1, 1989 - April 30, 1990
- budget for the fiscal year 1990/1
- chart of Museum staff
- listing of recent press coverage

I hope you will find the time to look at these materials before the meeting. In particular, the discussion of the FY91 budget at the meeting will assume some familiarity with the enclosed material.

It has been an excellent year for the Musuem; I look forward to sharing our achievements with you, and to setting the direction for the years ahead.

Please RSVP to Sue Johnson at (617) 426-2800 ext. 372; she can arrange parking if you need it.

Olin Strimpel

The
Computer
Museum

300 Congress Street
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MEETING OF THE COMPUTER MUSEUM BOARD OF DIRECTORS

JUNE 22, 1990 8:30AM-1:30PM

AGENDA

Call to order of Annual Meeting of Members of the Corporation
Election of new Members

Call to Order of Reconvened Meeting

The Year in Review (Strimpel)

FY91 Budget Discussion (McKenney/Petinella)

Computer Bowl 1991 (Bell)

Capital Campaign
background (Hendrie)
planning study (Del Sesto)

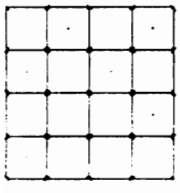
Exhibit Planning Timeline (Strimpel)

Reality on Wheels
travelling exhibit on virtual reality (Strimpel)

Milestones of a Revolution Exhibit
overview and exhibit techniques (Greg Welch, developer)
an international perspective (Professor Brian Randell)
educational impact (Jane Manzelli, Brookline Public Schools)

LUNCH

Meeting ajourns



The Computer Museum

Financial Statements

For the Ten Month Period
July 1, 1989 through April 30, 1990

THE COMPUTER MUSEUM
STATEMENT OF REVENUES AND EXPENSES
COMBINED OPERATING AND CAPITAL FUNDS
($ - Thousands)

	4/30/89	FOR THE TEN MONTHS ENDED 4/30/90				ANNUAL FY90	ANNUAL FY90
	ACTUAL	BUDGET	ACTUAL	FAV(UNFAV)		BUDGET	FORECAST
REVENUES:							
Operating Fund	886	1,309	1,288	(21)	(2%)	1,518	1,526
Capital Fund	426	963	1,087	124	13%	1,100	1,378
Total Revenues	1,312	2,272	2,375	103	5%	2,618	2,904
EXPENSES:							
Operating Fund	1,210	1,342	1,195	147	11%	1,650	1,503
Capital Fund	419	754	936	(182)	(24%)	1,053	1,295
Total Expenses	1,629	2,096	2,131	(35)	(2%)	2,703	2,798
NET REVENUES (EXPENSES)	($317)	$176	$244	$68	39%	($85)	$106

SUMMARY:

For the ten months ended April 30, 1990 the musuem operated at a surplus of 244K compared to a budgeted surplus of 176K. As of April 30, 1990 total cash and cash equivalents amounted to 595K.

OPERATING: Operating revenues were 2% under budget due mainly to shortfalls in Restricted Contributions (Computer Bowl), despite strong earned revenue of Admissions, Functions and Store revenues. Expenses were 11% under budget due mainly to lower personnel costs (vacant positions).

CAPITAL: Revenues were 13% over budget due to receipt of additional exhibit related revenue. Expenses were 24% over budget due to higher exhibit costs.

THE COMPUTER MUSEUM
STATEMENT OF REVENUES AND EXPENSES
OPERATING FUND
($ - Thousands)

	4/30/89	FOR THE TEN MONTHS ENDED 4/30/90				ANNUAL FY90	ANNUAL FY90
	ACTUAL	BUDGET	ACTUAL	FAV(UNFAV)		BUDGET	FORECAST
REVENUES:							
Unrestricted contributions:	53	$243	233	(10)	(4%)	$279	$281
Restricted contributions	256	371	310	(61)	(16%)	400	364
Corporate memberships	115	157	137	(20)	(13%)	188	150
Individual memberships	54	68	40	(28)	(41%)	82	52
Admissions	187	204	251	47	23%	247	302
Store	108	131	170	39	30%	163	205
Functions	86	105	116	11	10%	124	134
Other	33	30	31	1	1%	35	38
Gain/Loss on Securities	(6)	0	0	0	0%	0	0
Total Revenues	886	1,309	1,288	(21)	(2%)	1,518	1,526
EXPENSES:							
Exhibits & education	284	274	277	(3)	(1%)	324	324
Marketing & memberships	173	249	186	63	25%	298	241
Management & general	294	333	240	93	28%	409	307
Fundraising	99	76	65	11	14%	127	120
Store	111	132	161	(29)	(22%)	160	190
Functions	47	59	51	8	13%	70	63
Museum Wharf expenses	202	219	215	4	2%	262	258
Total Expenses	1,210	1,342	1,195	147	11%	1,650	1,503
NET REVENUES(EXPENSES)	($324)	($33)	$93	$126	381%	($132)	$23

THE COMPUTER MUSEUM
STATEMENT OF REVENUES AND EXPENSES
CAPITAL FUND
($ - Thousands)

	FOR THE TEN MONTHS ENDED						
	4/30/89	--------4/30/90----------				FY90	FY90
	ACTUAL	BUDGET	ACTUAL	FAV(UNFAV)		BUDGET	FORECAST
REVENUES:							
Contributions	$370	$325	$80	($245)	(75%)	$400	$210
Exhibit Funding	56	638	1,000	$362	574%	700	1,159
Interest Income	0	0	9	$9	100%	0	11
Gain/Loss on Securities	0	0	(2)	($2)	(100%)	0	(2)
Total Revenues	426	963	1,087	124	13%	1,100	1,378
EXPENSES:							
Exhibits	18	270	608	(338)	(125%)	481	916
Exhibit Administration	167	264	146	118	45%	313	162
Fundraising	99	92	54	38	41%	105	63
Wharf mortgage	135	128	128	0	0%	154	154
Total Expenses	419	754	936	(182)	(24%)	1,053	1,295
NET REVENUES (EXPENSES)	$7	$209	$151	($58)	(28%)	$47	$83

THE COMPUTER MUSEUM
BALANCE SHEET
4/30/90

	OPERATING FUND	CAPITAL FUND	PLANT FUND	TOTAL 4/30/90	TOTAL 6/30/89
ASSETS:					
Current:					
Cash	$124,444			$124,444	$149,212
Cash Equivalents	470,199			470,199	121,117
Investments		$40,134		40,134	37,500
Receivables	13,841			13,841	36,427
Inventory	65,433			65,433	43,708
Prepaid expenses	10,020	945		10,965	7,227
Interfund receivable		694,291		694,291	492,907
TOTAL	683,937	735,370	0	1,419,307	888,098
Property & Equipment (net):					
Equipment & furniture	-		$11,482	11,482	11,482
Capital improvements	-		699,126	699,126	699,126
Exhibits	-		336,276	336,276	336,276
Construction in Process	-	26,311		26,311	26,311
Land	-		24,000	24,000	24,000
Total	0	26,311	1,070,884	1,097,195	1,097,195
TOTAL ASSETS	$683,937	$761,681	$1,070,884	$2,516,502	$1,985,293
LIABILITIES AND FUND BALANCES:					
Current:					
Accounts payable and accrued expenses	$60,597	$58,083		$118,680	$76,446
Deferred income	15,740	-		15,740	22,230
Line of credit/Loan Payable	50,000	-		50,000	0
Interfund payable	694,291	-		694,291	492,907
Total	820,628	58,083	0	878,711	591,583
Fund Balances:					
Operating	(136,691)			(136,691)	(229,083)
Capital		703,598		703,598	551,909
Plant			$1,070,884	1,070,884	1,070,884
Total	(136,691)	703,598	1,070,884	1,637,791	1,393,710
TOTAL LIABILITIES AND FUND BALANCES	$683,937	$761,681	$1,070,884	$2,516,502	$1,985,293

THE COMPUTER MUSEUM
STATEMENT OF CHANGES IN CASH POSITION
4/30/90

	OPERATING FUND	CAPITAL FUND	PLANT FUND	TOTAL 4/30/90	TOTAL 6/30/89
Cash provide by/(used for) operations:					
Excesss/(deficiency) of support and revenue	$92,392	$151,689		$244,081	($606,578)
Depreciation				0	283,311
Cash from operations	92,392	151,689	0	244,081	(323,267)
Cash provided by/(used for) working capital:					
Receivables	22,586			22,586	(5,654)
Inventory	(21,725)			(21,725)	(4,011)
Investments		(2,634)		(2,634)	81,173
Accounts payable & other current liabs	(7,513)	49,747		42,234	(11,602)
Deferred income	(6,490)			(6,490)	7,980
Prepaid expenses	(6,320)	2,582		(3,738)	1,482
Cash from working capital	(19,462)	49,695	0	30,233	69,368
Cash provided by/(used for) Fixed assets	-			0	(33,147)
Net increase/(decrease) in cash before financing	72,930	201,384	0	274,314	(287,046)
Financing:					
Interfund pay. & rec.	201,384	(201,384)		0	-
Transfer to Plant				0	-
Line of credit/Loan Payable	50,000			50,000	0
Cash from financing	251,384	(201,384)	0	50,000	0
Net increase/(decrease) in cash & investments	324,314	0	0	324,314	(287,046)
Cash, beginning of year	270,329	0	0	270,329	557,375
Cash, end of period	$594,643		$0	$594,643	$270,329

THE COMPUTER MUSEUM

FY91 BUDGET

May 18, 1990

THE COMPUTER MUSEUM

FY91 BUDGET

SUMMARY

OPERATIONAL RESULTS

The FY91 Budget reflects a net deficit of $100K for the Museum. This net deficit represents the combined results of two funds; a $27K surplus in the "Operating Fund" and a $127K deficit in the "Capital Fund".

CASH FLOW

The available cash balance as of June 30, 1990 is expected to be approximately $410K. Based on achieving the FY91 Budget, the available cash balance is expected to be about $310K as of June 30, 1991.

Based on the monthly projections of cash flow, the Museum does not expect to fall below the DEC requirement to maintain a combined cash balance of $100K. If the combined cash balance were to fall below $100K for any two consecutive months, DEC would have the right to terminate the purchase option extension for the Museum Building.

OBJECTIVES

- Strong emphasis on increasing revenues:
  - Capital campaign for Endowment and Building
  - Operational activities
  - Exhibits
- Exhibit development based on specific contributions for exhibits:
  - Open "Milestones"
  - Open "Reality on Wheels"
  - Complete "Kits" program
  - Start "Computer Discovery Center"

ASSUMPTIONS

- Restructure the Museum's staff to develop and maximize productivity to support budget objectives.
- Continue responsibility for payment of Museum Wharf operating costs and mortgage payments.

THE COMPUTER MUSEUM STATEMENTS OF REVENUES AND EXPENSES

($ – Thousands)

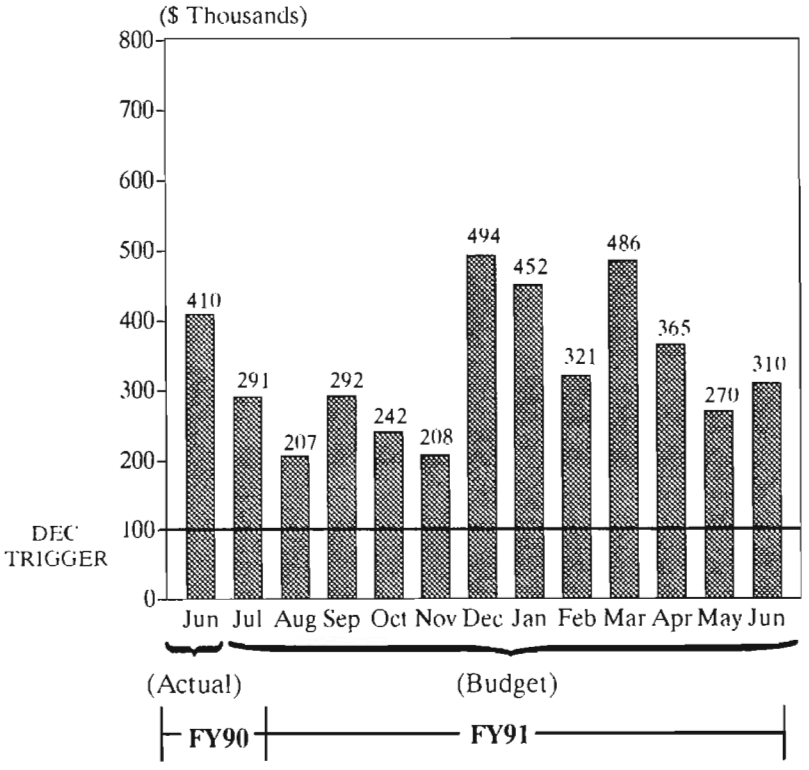
	OPERATING FUND			CAPITAL FUND			COMBINED		
	FY90 Budget	FY90 Projected	FY91 Budget	FY90 Budget	FY90 Projected	FY91 Budget	FY90 Budget	FY90 Projected	FY91 Budget
REVENUES									
Unrestricted Contributions	$601	$531	$600	$400	$210	$250	$1001	$741	$850
Restricted Contributions	78	114	315	700	1159	761	778	1273	1076
Corporate Memberships	188	150	200	–	–	–	188	150	200
Individual Memberships	82	52	52	–	–	–	82	52	52
Admissions	247	302	370	–	–	–	247	302	370
Store	163	205	268	–	–	–	163	205	268
Functions	124	134	153	–	–	–	124	134	153
Interest income	9	10	4	–	11	–	9	21	4
Other	26	28	57	–	–	–	26	28	57
Gain (Loss) on Securities	–	–	–	–	(2)	–	–	(2)	–
TOTAL REVENUE	**1,518**	**1,526**	**2,019**	**1,100**	**1,378**	**1,011**	**2,618**	**2.904**	**3,030**
EXPENSES									
Exhibits Development	6	6	204	481	916	746	487	922	950
Exhibits & Collections	98	117	123	–	–	–	98	117	123
Education	287	288	261	–	–	–	287	288	261
Marketing & Memberships	344	275	391	–	–	–	344	275	391
Gen. Management	288	186	239	313	162	90	601	348	329
Fundraising	135	120	182	105	63	155	240	183	337
Store	160	190	232	–	–	–	160	190	232
Functions	70	63	74	–	–	–	70	63	74
MW Operating Costs	262	258	286	–	–	–	262	258	286
MW Mortgage	–	–	–	154	154	147	154	154	147
TOTAL EXPENSE	**1,650**	**1,503**	**1,992**	**1,053**	**1,295**	**1,138**	**2,703**	**2,978**	**3,130**
NET SURPLUS (DEFICIT)	**$(132)**	**$23**	**$27**	**$47**	**$83**	**$(127)**	**$(85)**	**$106**	**$(100)**

NOTE:

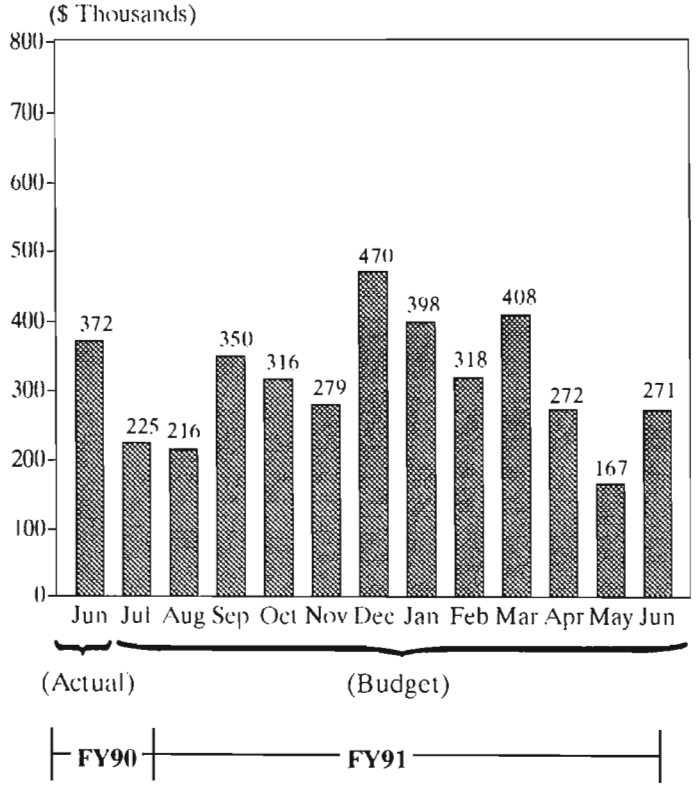
To achieve an appropriate comparison by line item, reclassifications were made for the FY90 Budget and Projected columns to conform to the FY91 Budget presentation.

THE COMPUTER MUSEUM
BAR GRAPH REPRESENTATION OF MONTHLY CASH BALANCE
FY91

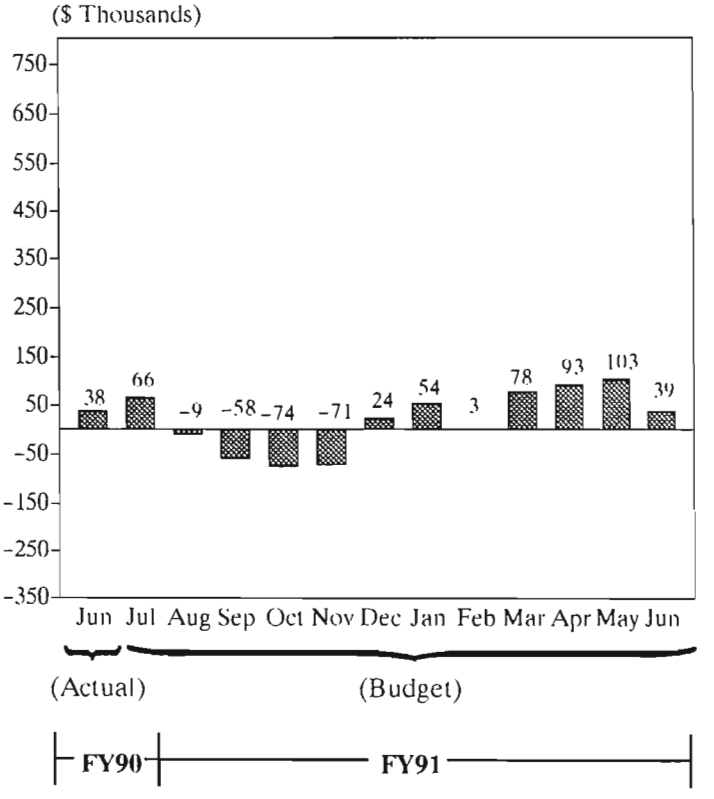
COMBINED RESTRICTED & UNRESTRICTED MONTH END CASH BALANCE



RESTRICTED MONTH END CASH BALANCE



UNRESTRICTED MONTH END CASH BALANCE



NOTE: Restricted cash balance includes funding for Exhibits, Building and Endowments.

THE COMPUTER MUSEUM
NOTES
FY91 BUDGET

1. Revenue Recognition

Restricted and unrestricted contributions are recognized when received. Memberships are recorded as income according to the fiscal year in which they pertain and deferred if applicable to future years. Pledge revenue is recorded when received. Income from functions and events is recorded as of the date of the event.

2. Depreciation

Set forth below are estimates of depreciation amounts which were not included in the FY90 Forecast or FY91 Budget since they do not require any cash flow out. Depreciation is determined based on the estimated useful lives of the assets on a straight line basis. Depreciable assets include equipment and the cost of permanent exhibits depreciated over 5 years; leasehold improvements depreciated over 20 years; and the building, when acquired, depreciated over 32 years. The amount of depreciation for both FY90 and FY91 is expected to be approximately $283K.

3. Employees

As of June 30, 1990, full time equivalent employees (FTE's) are expected to be 33. As of June 30, 1991, FTE's are expected to be 36.

4. Memberships

The following is a summary of the estimated number of Museum members:

	FY90	FY91
Corporate	100	125
Individual	1,150	1,650
Total	1,250	1,775

5. Unrestricted Contributions

The following is a summary of the unrestricted contributions (Dollars in Thousands):

DESCRIPTION	FY90	FY91
Computer Bowl	$250	$300
Corporation & Foundation Grants	4	180
Government	75	-
Annual Drive	100	120
Individuals	89	-
Other Sources	13	-
Operating Fund Total	531	600
Capital Fund Total	210	250
	$741	$850

6. Restricted Contributions

Restricted contributions represent amounts designated by the donor to be expended for specific activities, functions, programs, exhibits or types of expenditures.

The following is a summary of the restricted contributions (Dollars in Thousands):

DESCRIPTION	FY90	FY91
KITS	$ 33	$ 96
Mass Council	18	18
IMS	7	-
Reality on Wheels	40	180
Public Programs	-	11
Breakfast Seminars	16	-
General	0	10
Operating Fund Total	114	315
Capital Fund Total (Exhibits)	1159	761
	$1273	$1076

7. Admissions

Set forth below are the attendance levels and average revenue per visitor by year. Effective April 1, 1990, the admission fee was increased by $1.00 bringing the total admission fee to $6.00. No increase is planned for FY91.

YEAR	Number of Visitors	% Inc - Dec	Average Admission Revenue per Visitor
FY85	34,000 (approx. 5 mos.due to move from Marlboro to Boston)	NM	$2.18
FY86	77,000 (actual)	NM	2.32
FY87	77,619 (actual)	.8%	2.48
FY88	77,072 (actual)	-.7%	2.92
FY89	88,041 (actual)	14%	2.64
FY90	90,000 (forecast)	2%	3.33
FY91	104,000 (budget)	15%	3.56

The budgeted increase in visitors for FY91 is based on strengthened and focused marketing efforts, opening of the "Walk Through Computer" exhibit, hosting Siggraph conference again and associated traffic from DEC World.

8. Capital Fund Contributions

Capital Fund revenues represent the amounts received from pledges. The FY91 Budget includes anticipated receipt of installments on capital campaign pledges made prior to FY91 and the amounts received from new pledges made under Phase II of the Capital Campaign.

The following is a summary of amounts received and expected to be received from pledges already made and from pledges to be received from the Capital Campaign (Dollars in Thousands):

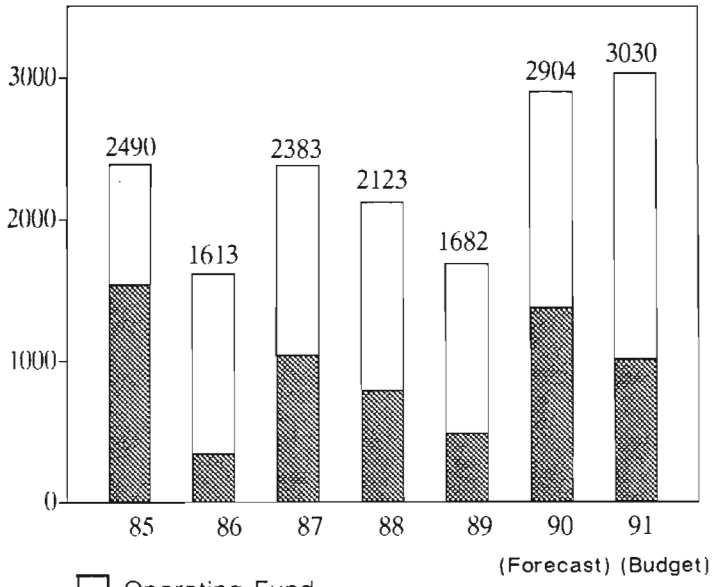
Fiscal Year	Phase I	Phase II	Exhibits	Total
1987	$ 375	$ 192	$ 299	$ 866
1988	155	395	126	676
1989	48	340	95	483
1990	16	194	1159	1369
1991	10	240	761	1011
	$ 604	$1361	$2440	$4405

THE COMPUTER MUSEUM

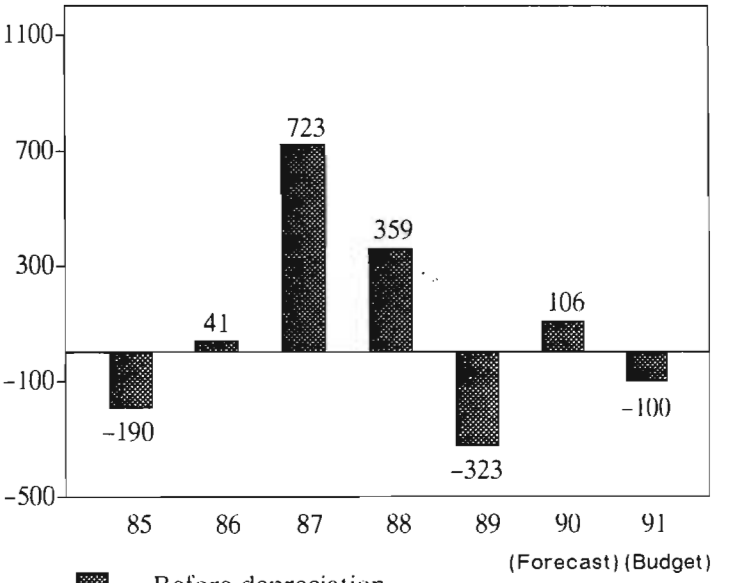
SUPPLEMENTAL FINANCIAL INFORMATION

THE COMPUTER MUSEUM
ANNUAL FINANCIAL SUMMARY
FY85 - FY91
($ - Thousands)

REVENUES



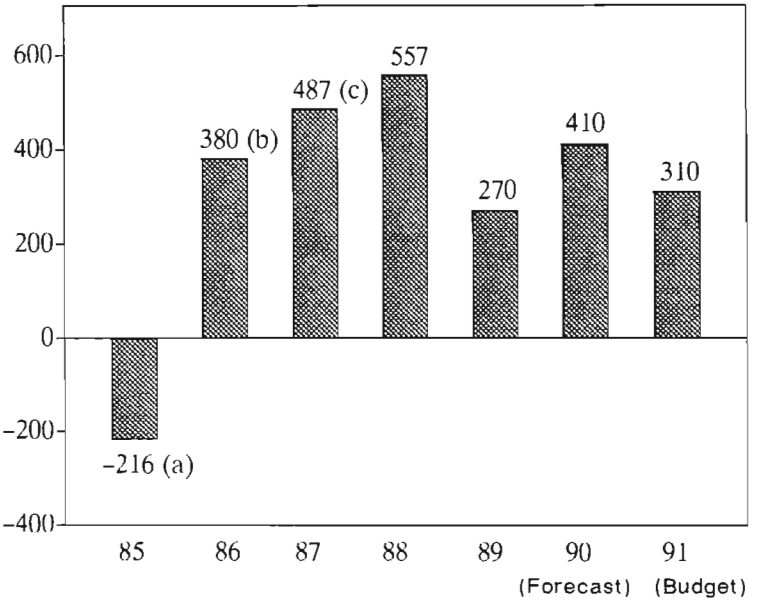
NET SURPLUS/ - DEFICIT



Before depreciation as follows:

FY85	$ 62
FY86	101
FY87	110
FY88	308
FY89	283
FY90 (Est.)	283
FY91 (Est.)	283

CASH BALANCE

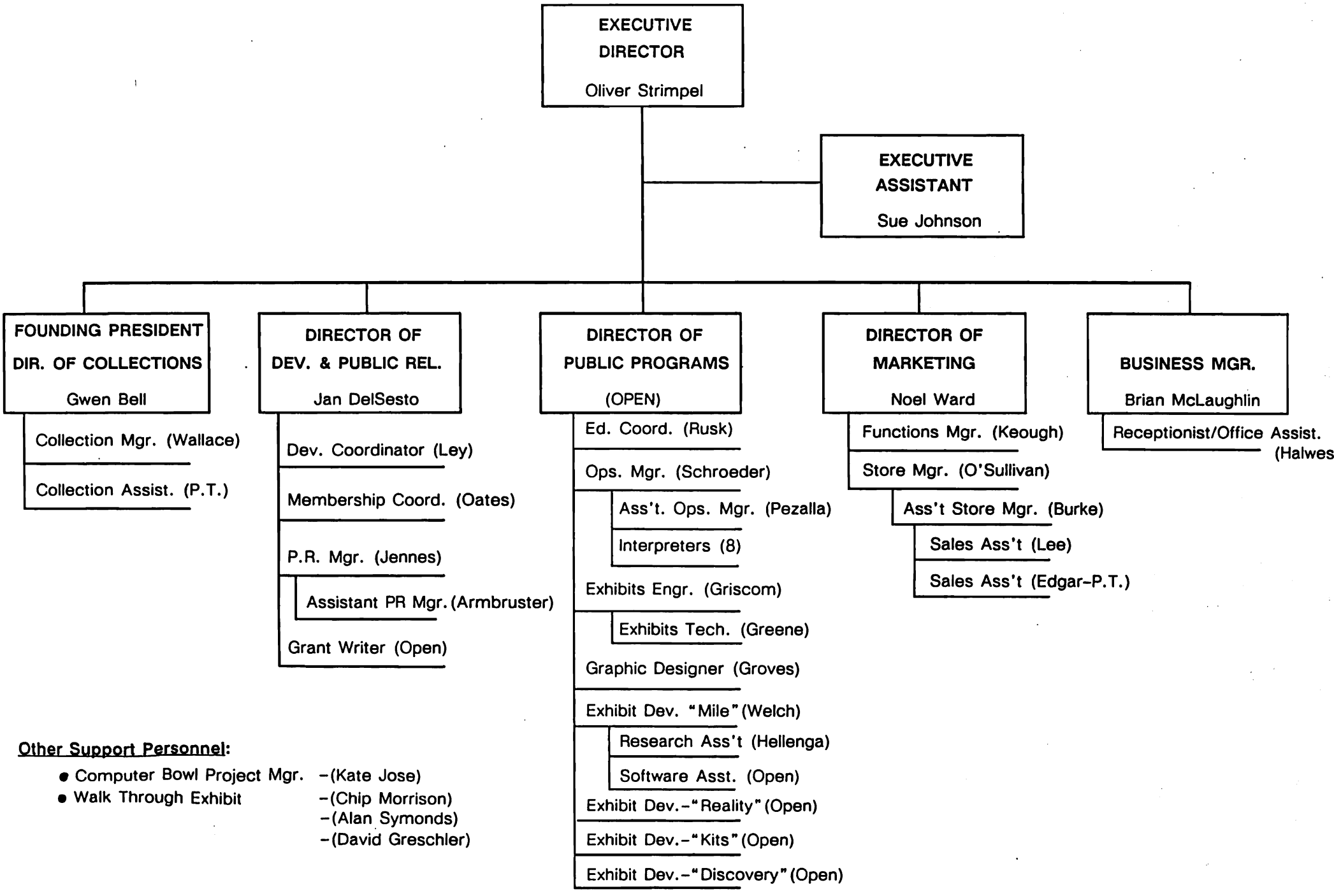


(a) Borrowed $285K to finance $216K deficit resulting in net cash balance of $69K.

(b) Repaid $200K of borrowings resulting in net cash balance of $180K.

(c) Repaid remaining $85K of borrowings resulting in net cash balance of $402K.

THE COMPUTER MUSEUM
Organizational Chart



Other Support Personnel:

- Computer Bowl Project Mgr. -(Kate Jose)
- Walk Through Exhibit -(Chip Morrison)
  -(Alan Symonds)
  -(David Greschler)

The Computer Museum

300 Congress Street
Boston, MA 02210
(617) 426-2800

MEDIA SUMMARY: IN BRIEF

February 16, 1990-May 31, 1990

PRINT
Total Circulation: 76,914,057

ELECTRONIC:
Total impressions: 17,850,000

International Highlights

News of The Computer Museum and/or The Walk-Through Computer has spanned the globe with a half-page piece in the March 26 London Daily Telegraph and a Jerusalem Post feature on the Museum last December. The Telegraph story prompted a stream of inquiries from Great Britain including the London Times, New Computer Express, Electronic Times, the BBC prime-time science program Tomorrow's World and the BBC's Search Out Science show for children.

In addition, Zeit Magazin's (Germany's Time Magazine) Special Computer issue in March featured an extensive article on the Museum mentioning The Walk-Through. The West German Siemens Review (read by 40,000 of the world's opinion leaders) published a feature on The Walk-Through in its May/June issue. Der Spiegel (Germany's Newsweek) is currently writing a piece. And VDR, West Germany's state-owned network, plans a 10-minute segment for High Score, a program for young adults, with an audience of one million.

In June, Japan's Channel 12 network Nightly Business News plans a feature on the Museum, and Lufthansa is shooting an in-flight video on the Museum as a tourist must-see.

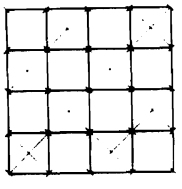
Also of interest: Both Guinness Book of Records and Collier's Encyclopedia Yearbook wants to include The Walk-Through exhibit in their publications.

National Highlights

Major placements on The Walk-Through: a June 4 NEWSWEEK piece in the "Lifestyle" section ("This Is Big, Reeeeally Big: The Computer Museum's new exhibit combines high-tech education with razzle-dazzle") and a May 20 New York Times Sunday Magazine Back Page "Works in Progress" piece. The Walk-Through will also be highlighted in USA Weekend (it has close to 30 million readers), Popular Science, and Family Circle.

The AP, UPI, USA Today, Los Angeles Times, Computerworld, Electronic Engineering Times, Information Week, Lotus Magazine, Personal Computing, The Boston Sunday Globe, and CHILDSPLAY Magazine are highlighting the exhibit with features or other coverage. Also coming up this June a story in Results Magazine (read by 30,000 top management executives in the US).

NBC's TODAY will be the first network morning show to introduce the country to the exhibit on June 21 in a feature live from the Museum, CNN's Science and Technology show plans a segment for its five million viewers, and Good Morning America also wants to do a live segment from inside The Walk-Through Computer.



Other pieces include "Journey to the Center of the PC" in the April 23rd BusinessWeek and features in the May issue of Popular Mechanics, The Boston Globe, The Boston Herald, and the April 18th issue of a North Shore Weekly chain distributed to 110,000 people in Massachusetts.

The Boston Globe broke The Walk-Through story back in December. In March, The Sunday New York Times highlighted the new exhibit in a piece on the Museum that has been reprinted across the country and in Canada. The April issue of Compute! featured a photograph and description of The Walk-Through as part of an extensive feature about the Museum.

Other Highlights

More than one million people saw the "West Coast Nerds Beat the East Eggheads" during The Second Annual Computer Bowl on Computer Chronicles in May, and another six million read about the Bowl in publications like The Wall Street Journal, San Jose Mercury News, Dallas Morning News, Boston Globe, Byte, and Marketing Computers.

Also, the May/June 1990 10th Anniversary Issue of Classroom Computer Learning featured the Museum's Memories poster on its cover, urging readers to become Museum members.

5/31/90

THE WALK-THROUGH COMPUTER
MEDIA SUMMARY
(Includes upcoming placements)

PRINT

PUBLICATION:	**THE BOSTON GLOBE**
CIRCULATION:	509,500
DATE:	December 8, 1989
HEADLINE:	"Odds and Ends"
DESCRIPTION:	Mention in Alex Beam's column
CONTACT:	Alex Beam

PUBLICATION:	**POPULAR MECHANICS**
CIRCULATION:	1,600,000
DATE:	May 1990
HEADLINE:	"Museums for the Future"
DESCRIPTION:	Story and two pictures about The Walk-Through Computer
CONTACT:	Abe Dane

PUBLICATION:	**THE NEW YORK TIMES**
CIRCULATION:	1,593,100
DATE:	March 4, 1990
HEADLINE:	"Computers on Display, But Not on a Pedestal"
DESCRIPTION:	Feature on Museum and Walk-Through Computer
CONTACT:	Anne Driscoll

PUBLICATION:	**COMPUTE!**
CIRCULATION:	260,000
DATE:	April 1990
HEADLINE:	"Welcome to My Machine"
DESCRIPTION:	Feature on the Museum and The Walk-Through Computer
CONTACT:	Keith Ferrell

PUBLICATION:	**PERSONAL COMPUTING**
CIRCULATION:	501,440
DATE:	June 1990
CONTACT:	Rob Bel Bruno

PUBLICATION:	**CHILDSPLAY**
CIRCULATION:	40,000
DATE:	June 1990

PUBLICATION: FAMILY CIRCLE
CIRCULATION: 5.75 million
DATE: June 26, 1990
HEADLINE: "Circle this: June is..."
DESCRIPTION: Highlighted in News to Use section with keyboard photo
CONTACT: Margaret Jaworski

PUBLICATION: THE DAILY TELEGRAPH
CIRCULATION: 1.15 million
DATE: March 26, 1990
HEADLINE: "The Two-storey Desktop Computer"
DESCRIPTION: Feature story on The Walk-Through Computer
CONTACT: Dr. Roger Highfield

PUBLICATION: EAGLE(WICHITA, KANSAS)
CIRCULATION: 193,502
DATE: March 18, 1990
HEADLINE: "Computer History, use on display
DESCRIPTION: Reprint of New York Times article
CONTACT: Anne Driscoll

PUBLICATION: BUSINESSWEEK
CIRCULATION: 400,000
DATE: April 23, 1990
HEADLINE: "Journey to the Center of the PC"
DESCRIPTION: Piece on The Walk-Through Computer
CONTACT: Mark Lewyn

PUBLICATION: WGBH MAGAZINE
DATE: June 1990
HEADLINE: "Inside Story"
DESCRIPTION: Item on The Walk-Through Computer
CONTACT: Sarah Bailey

PUBLICATION: THE REGION (BOSTON NORTH SHORE WEEKLY CHAIN)
CIRCULATION: 110,000
DATE: April 18, 1990
HEADLINE: "Computer Museum Head Oliver Strimpel is User-Friendly"
DESCRIPTION: Feature on Oliver Strimpel and The Walk-Through Computer
CONTACT: Dan Kennedy

PUBLICATION: SUNDAY NEW YORK TIMES MAGAZINE
CIRCULATION: 1,593,100
DATE: May 20, 1990
HEADLINE: "Byte-Sized, but Big"
DESCRIPTION: "Back Page" feature on The Walk-Through Computer
CONTACT: Bruce Weber

PUBLICATION: ZEIT MAGAZIN
DATE: March 1990
HEADLINE: "Veteranen Aus Blech"
DESCRIPTION: Feature (in German) on the Museum
CONTACT: Wolfram Runkel

PUBLICATION: POPULAR SCIENCE
CIRCULATION: 1.8 million
DATE: August 1990
DESCRIPTION: "What's New" piece on The Walk-Through Computer
CONTACT: Judith Yeaple

PUBLICATION: WORKING WOMAN
CIRCULATION: 1 million
DATE: August 1990
DESCRIPTION: Story on The Walk-Through Computer
CONTACT: Pam Bentley

PUBLICATION: USA WEEKEND
CIRCULATION: 29,500,000
DATE: June 1990
DESCRIPTION: Piece on The Walk-Through Computer
CONTACT: Benjamin Sessioms

PUBLICATION: USA TODAY
CIRCULATION: 1,631,335
DATE: Early June
DESCRIPTION: Mentioned in article about cross country travel
CONTACT: Joan Murphy

PUBLICATION: NEWSWEEK
CIRCULATION: 3.1 million
DATE: June 4, 1990
HEADLINE: "This is Big. Reeeeally Big"
DESCRIPTION: Story on The Walk-Through Computer/Science Section
CONTACT: John Schwartz

PUBLICATION: THE BOSTON HERALD
CIRCULATION: 355,494
DATE: May 23, 1990
HEADLINE: "Bigger-than-life computer to go on display at museum"
DESCRIPTION: Feature w/R. Fowler, D. Griscom, C. Morrison
CONTACT: Paul Beckett

PUBLICATION: THE DENVER POST
CIRCULATION: 227,105
DATE: April 23, 1990
HEADLINE: "Computer Museum puts visitors in touch with technology"
DESCRIPTION: New York Times reprint
CONTACT: Anne Driscoll

PUBLICATION: ELLE (SOUTH AMERICAN EDITION)
CIRCULATION: 600,000 plus issues to Brazil, Venezuela, Chile and Portugal
DATE: July 1990
CONTACT: Katia Pigossi-Zero

PUBLICATION: BYTE MAGAZINE
CIRCULATION: 495,000
DATE: August 1990
DESCRIPTION: Piece in the "Nanobytes" section
CONTACT: Dave Andrews

PUBLICATION: BYTE
CIRCULATION: 125,000 (regional issue)
DATE: August 1990
DESCRIPTION: Story about The Walk-Through Computer
CONTACT: Dave Andrews

PUBLICATION: ELECTRONIC ENGINEERING TIMES
CIRCULATION: 121,537
DATE: June 4, 1990
CONTACT: Bob Bellinger

PUBLICATION: RESULTS MAGAZINE
CIRCULATION: 30,000 Industrial corporate leaders
DATE: June 1990
HEADLINE: "Boston's Visitor-Friendly Museum"
DESCRIPTION: Feature on the Museum and The Walk-Through Computer
CONTACT: Bill Hogan

PUBLICATION: COMPUTERWORLD
CIRCULATION: 147,899
DATE: June 4, 1990
DESCRIPTION: Story on The Walk-Through Computer
CONTACT: Michael Alexander

PUBLICATION: LOTUS MAGAZINE
CIRCULATION: 384,816
DATE: July 1990
DESCRIPTION: Feature on The Walk-Through Computer
CONTACT:

PUBLICATION: LOTUS NOTICE
CIRCULATION: In-house publication
DATE: July 1990
DESCRIPTION: Feature on The Walk-Through Computer
CONTACT: Lee Goodwin

PUBLICATION: BOSTONIA
CIRCULATION: 143,700
DATE: May-June 1990
HEADLINE: "The Computer Museum"
DESCRIPTION: Highlight of The Walk-Through Computer
CONTACT: Ian Springsteel

PUBLICATION: HEWLETT-PACKARD MAGAZINE
DATE: June 1990
DESCRIPTION: Feature on The Walk-Through Computer
CONTACT: Theodora Nelson

PUBLICATION: THE BOSTON GLOBE
DATE: June 2, 1990
HEADLINE: "It's Bigger Than Byte-Sized"
DESCRIPTION: "Feature story about The Walk-Through Computer
CONTACT: Ron Rosenberg

ELECTRONIC:

TELEVISION:

PROGRAM:	NBC TODAY
DATE SHOT:	June 19, 1990
DATE AIRED:	June 21, 1990
AUDIENCE:	3.6 million
DESCRIPTION:	Feature piece on The Walk-Through Computer
CONTACT:	Coby Atlas

PROGRAM:	CNN "SCIENCE AND TECHNOLOGY"
DATE AIRED:	June 21-24, 1990
AUDIENCE:	5 million
DESCRIPTION:	Feature on The Walk-Through Computer
CONTACT:	Jeff Garrard

PROGRAM:	WDR CHANNEL ONE (WEST GERMAN TELEVISION)
DATE SHOT:	May 25, 1990
DATE AIRED:	September
DESCRIPTION:	10 minute feature on "High Score," a computer show
AUDIENCE:	1 million

RADIO:

PROGRAM:	PUBLIC SERVICE ANNOUNCEMENT
NETWORK/STATION:	WJIB
DATE SHOT:	May 25, 1990
DATE AIRED:	July 4, 1990 weekend
CONTACT:	Scott Apple
DESCRIPTION:	Interview regarding Videofest and The Walk-Through Computer

PROGRAM:	MORNING EDITION-NEW ENGLAND MINUTES
NETWORK/STATION:	WBUR
DATE SHOT:	May 23, 1990
DATE AIRED:	May 24, 1990
AUDIENCE:	270,000
CONTACT:	David Wright
DESCRIPTION:	Feature piece on The Walk-Through Computer

MEDIA COVERAGE OF THE COMPUTER BOWL 1990

PUBLICATION: MASS HIGH TECH
CIRCULATION: 37,000
DATE: November 20, 1989
HEADLINE: "In This Corner"
DESCR: Item on Bowl

PUBLICATION: MARKETING COMPUTERS
CIRCULATION: 20,600 (MONTHLY)
DATE: December 1989
HEADLINE: "When East meets West"
DESCR: Item on Bowl

PUBLICATION: STUART ALSOP'S PC LETTER
DATE: December 13, 1989
HEADLINE: "Research and Developments: Party Time"
DESCR: Bowl description
CONTACT: Stuart Alsop

PUBLICATION: INFORMATION WEEK
CIRCULATION: 148,146
DATE: January 1, 1990
HEADLINE: "Computer Bowl II"(In "Miscellany")
DESCR: Item on Bowl

PUBLICATION: COMPUTER MAGAZINE
CIRCULATION: 78,000
DATE: January 1990
HEADLINE: "Computer Bowl II--Let the chips fall where they may"
DESCR: Bowl story in Update section
CONTACT: Steve Wilcox

PUBLICATION: SOFTWARE MAGAZINE
CIRCULATION: 95,000
DATE: February 1990
HEADLINE: "April"
DESCR: Calendar listing of the Bowl

PUBLICATION: SAN JOSE MERCURY NEWS
CIRCULATION: 308,427
DATE: February 14, 1990
HEADLINE: Nerd vs. Nerd (Bits and Bytes)
DESCR: Item on Bowl
CONTACT: Ron Wolf

PUBLICATION: TECHMART LETTER
DATE: February/March/April
HEADLINE: "Techmart to Host Live Satellite Broadcast of Computer Bowl"
DESCR: Piece on the Bowl at Techmart

PUBLICATION: BOSTON COMPUTER CURRENTS
CIRCULATION: 45,000
DATE: April 1990
HEADLINE: "Computer Museum hosts Second Computer Bowl"
DESCR: Short feature on the Bowl

PUBLICATION: BYTE
CIRCULATION: 435,000
DATE: April 1990
DESCR: Item on Bowl

PUBLICATION: SAN FRANCISCO EXAMINER-CHRONICLE
CIRCULATION: 705,341
DATE: March 25, 1990
HEADLINE: "Inside Technology"
DESCR: Column on women in computing; lack of women in bowl
CONTACT: Denise Caruso

PUBLICATION: THE BOSTON HERALD
CIRCULATION: 355,355
DATE: April 29, 1990
HEADLINE: "West edges out East in high-tech face-off
DESCR: Feature on Bowl
CONTACT: Dana Bisbee

PUBLICATION: THE BOSTON GLOBE
CIRCULATION: 509,500
DATE: April 30, 1990
HEADLINE: "Silicon Valley gets its revenge"
DESCR: Feature on Computer Bowl
CONTACT: Jane Fitz Simon

PUBLICATION: THE WALL STREET JOURNAL
CIRCULATION: 1,931,410
DATE: April 30, 1990
HEADLINE: "West Coast Nerds Beat East Eggheads In Computer Bowl"
DESCR: Feature on The Computer Bowl
CONTACT: John Wilke

PUBLICATION: THE SAN JOSE MERCURY NEWS
CIRCULATION: 268,967
DATE: April 28, 1990
HEADLINE: "West Wins--Left Coast gets revenge in Computer Bowl II"
DESCR: Feature on The Computer Bowl
CONTACT: Ron Wolf

PUBLICATION: IDG WORLD UPDATE
DATE: MAY 7, 1990
HEADLINE: "Computer Bowl II: East Meets West"
DESCR: Feature on the Bowl

PUBLICATION: COMMUNICATIONS OF THE ACM
CIRCULATION: 75,000
DATE: August 1990
DESCR: Feature on The Computer Bowl
CONTACT: Karen Frenkel

PUBLICATION: MARKETING COMPUTERS
CIRCULATION: 20,600 (MONTHLY)
DATE: June 1990
DESCR: Feature on Computer Bowl

PUBLICATION: COMMUNICATIONS OF THE ACM
CIRCULATION: 75,000
DATE: April 1990
HEADLINE: "ACM to present Computer Museum's second computer bowl"
DESCRIPTION: Feature on Computer Bowl
CONTACT: Karen Frenkel

PUBLICATION: THE DALLAS MORNING NEWS
CIRCULATION: 535,465
DATE: April 22, 1990
HEADLINE: "Technology"
DESCRIPTION: Item on Computer Bowl
CONTACT: Tom Steinert-Threlkeld

PUBLICATION: SUN (LOWELL, MASS)
CIRCULATION: 55,763
DATE: April 30, 1990
HEADLINE: "West beats East in Computer Bowl"
DESCRIPTION: Item about The Computer Bowl

PUBLICATION: CALIFORNIA COMPUTER NEWS
CIRCULATION: 40,000
DATE: April 1990
HEADLINE: "West Coast Seeks Revenge"
DESCRIPTION: Item about The Computer Bowl

PUBLICATION: MACWEEK
CIRCULATION: 76,487
DATE: May 8, 1990
HEADLINE: "West Coast vindicated in second Computer Bowl"
DESCRIPTION: Piece on The Computer Bowl
CONTACT: Associated Press

PUBLICATION: TIMES (HAMMOND, ID)
CIRCULATION: 72,380
DATE: April 29, 1990
HEADLINE: "W. Coast wins Computer Bowl"
DESCRIPTION: Piece on The Computer Bowl
CONTACT: Associated Press

PUBLICATION: FLORENCE (SC) MORNING NEWS
CIRCULATION: 30,939
DATE: April 29, 1990
HEADLINE: "Coast wins second annual computer bowl"
DESCRIPTION: Feature on The Computer Bowl
CONTACT: Associated Press

ELECTRONIC

TELEVISION:

PROGRAM: PCTV
NETWORK/STATION: New Hampshire Public Television
DATE SHOT: April 27, 1990-To air on an upcoming show
CONTACT: Sara Steinman

PROGRAM: COMPUTER CHRONICLES
NETWORK/STATION: PBS
AUDIENCE: 1 million
DATE TAPED: April 27, 1990
DATE AIRED: Weeks following May 21 and 28
CONTACT: Stewart Cheifet

RADIO:

PROGRAM:	**COMPUTING SUCCESS**
NETWORK/STATION:	**Business Radio Network**
AUDIENCE:	**4,400,000**
DATE TAPED:	**April 27 and May 3, 1990**
DATE AIRED:	**May 5-12, 1990**
CONTACT:	**Tom Foulks**
DESCRIPTION:	**Feature piece on The Computer Bowl**

TECHNOLOGY

This Is Big. Reeeeally Big.

The Computer Museum's new exhibit combines high-tech education with razzle-dazzle

For years, the goal in computing has been to make things smaller, building down from early room-size monsters to today's palmtop PCs. Even computer terms—like "bit" and "microprocessor"—connote tininess. Now The Computer Museum, Boston's repository of vintage number-crunchers and intriguing interactive exhibits, has gone the other way: a really, really BIG computer, two stories tall. It boasts keys a foot across, six-foot-wide disks and—get ready for this oxymoron—the biggest microchip in the world, 7½ feet square. The Walk-Through Computer, a new permanent exhibit modeled after such displays as the walk-through human heart at Chicago's Museum of Science and Industry, will give visitors a chance to see the soul of a new machine close up. No wonder the museum is calling the June 21 unveiling "the biggest event in computer history." Steve Jobs, eat your heart out.

IRA WYMAN FOR NEWSWEEK

A bit of fun: *Kids cavort on the keys of the work in progress.*

From the outside, the machine looks like most any PC with a pituitary condition. It will even run a program—"World Traveler," designed by museum staffers. Using the gargantuan keys and a pointing device known as a trackball—this one measures almost 10 feet by 7 feet—visitors choose two spots on a map. The computer figures the shortest route between the two cities and flashes pictures of sights along the way—say, San Francisco's Golden Gate Bridge, or Amarillo's Cadillac Ranch. The trackball, keyboard and screen are connected to an Apple Macintosh squirreled away backstage that does the actual computing. A Digital Equipment Corp. computer controls special effects.

After fiddling with the program, visitors can enter the chassis and walk from component to component, guided by the circuitry itself and illustrations by David Macaulay, author of the best-selling "The Way Things Work." Each part of the machine tells its own story. At the center of the board lies the microprocessor "brain," a replica of the Intel 486 found in today's most powerful PCs. Looking into a window on the chip, visitors will see a hugely enlarged picture of the actual lines etched in the silicon. That image fades, and computer-produced artwork takes over, zooming down to the surface for a step-by-step animated portrayal of the chip's operation—the tiny mundane steps that it accomplishes millions of times each second, such as asking the memory for a chunk of data and shooting that information out to the screen. That image is in turn replaced by footage taken by a scanning electron microscope which shows a real 486 chip at work. (Since the microscope's image is made up of electrons, it can "see" the changes in voltage along the chip.) Beyond the PC itself, a video "software theater" explains the way the computer's programming interacts with the hardware. So that visitors could learn as much or as little as they wish, the designers kept as their motto, "Simple message, rich context." A bank of terminals on the way out of the exhibit allows even further delving into the arcana of computing.

The elegant idea is the brainchild of the museum's executive director, Oliver Strimpel, who has been working on the $1.2 million exhibit for three years. Despite the expense, Strimpel found it the easiest sell of his career. "It clicked immediately with everyone," he says, glowing. "Everyone said, 'Of course! You've got to do that'."

'Make it sing': Putting it together hasn't been quite as easy. Even though the museum staff had decided from the beginning that their mock-up computer would not actually perform the computations, they wanted verisimilitude—a computer that *could* work. The museum took on the extra challenge to satisfy the technologically demanding Route 128 crowd. "We believe that authenticity is what's really going to make it sing for the technical people," Strimpel says. So they turned to a group of companies that design computer boards. Creating the main board, or "motherboard," usually takes two weeks, but this job took two months. The designers faced unusual constraints, says museum spokesperson Gail Jennes: "They not only had to worry about how to move data around, they also had to move people around." (To get to the men's room, you have to walk through the "power supply.") Now "it can work," says Donald Glass, whose company, DGA Associates, coordinated the design effort and had several small-scale models with real chips made for the museum. He admits DGA stopped short of a thorough debugging. "I just hope they don't plug it in."

All right, so we all agree it's cool. But what else? Strimpel says the Big Box should fulfill one of the first missions of the museum, which is to demystify computing. "Any place you've been is less of a mystery than any place you haven't been," Strimpel says. It should thrill kids and satisfy inquisitive adults. Once visitors have ventured into this cross between "Fantastic Voyage" and "Land of the Giants," they will know more about computers—as much as most would ever want to know. So the big computer will have done something that its pygmy brethren have so far found nearly impossible: making learning fun.

JOHN SCHWARTZ *in Boston*

NEWSWEEK, JUNE 4, 1990
Circ: 3,149,253

Sunday, May 20, 1990
CIRC: 1.6 million

PHOTOGRAPHS BY SETH RESNICK FOR THE NEW YORK TIMES

Byte-Sized, but Big

THE MONITOR (RIGHT) IS 14 feet high. The keyboard (above) is 25 feet long. The floppy disk is six feet on a side. In an era in which the desktop computer stands as a monument to miniaturization, the walk-through computer exhibit being installed at the Computer Museum in Boston is iconoclastic in its dimensions, if more conventionally educational in its purpose. "We want to provide people with a compelling introduction to computers," says the director of the museum, Oliver B. Strimpel, who conceived the project three years ago.

Designed by Richard Fowler, an Englishman who is head of design at Britain's National Museum of Photography, Film and Television, and fabricated by the F. W. Dixon Company in Woburn, Mass., the exhibit includes learning stations and a video show that explains how software works. It opens to the public June 23.

The computer itself, two stories high, 50 times ordinary size, will allow museum visitors to run an actual program and, through a combination of hardware and software, special effects and animation, witness a simulation of the information processing system as the program is carried out. The program, called World Traveler, is designed to locate the shortest driving route between two specified cities. The visitor selects a starting city and a destination; the monitor will then display a brief slide show of sights along the route. Inside the computer, the working electronics are on display, with lights illustrating the path of data bits as they whip around on giant silicon chips.

"What a museum offers is a three-dimensional environment," Strimpel says. "You can put people into a space and control the sensory input from all directions. This is something you don't get from a film or a book or from interacting with a piece of software."

— BRUCE WEBER

Wide-screen entertainment.

The New York Times Magazine

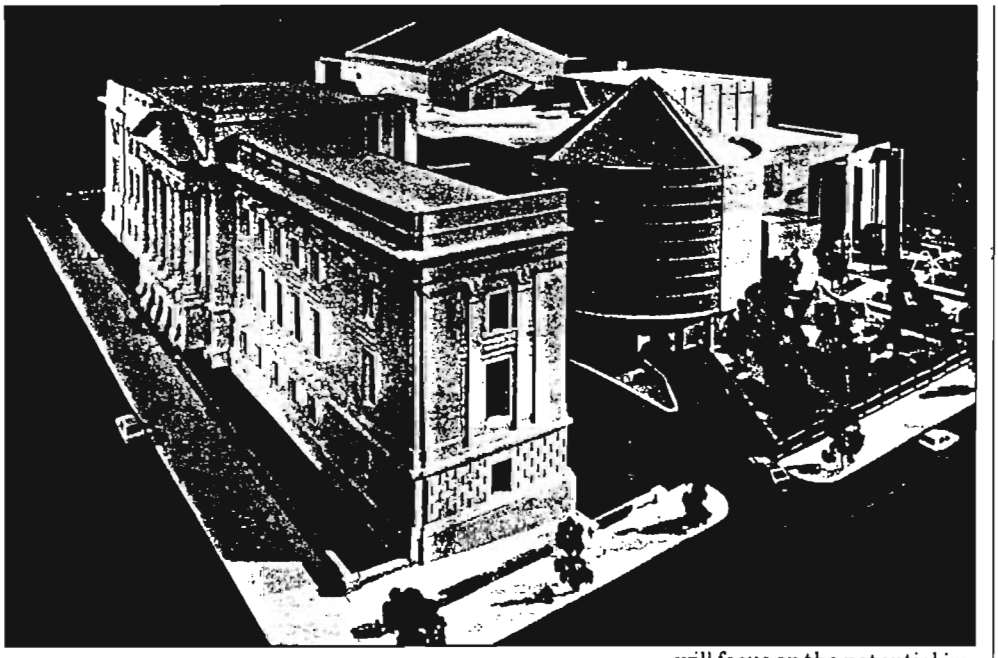
May 20, 1990

Cover: *Photograph by Bill Eppridge for The New York Times.*

SCIENCE

BY ABE DANE, Science/Technology Editor

POPULAR MECHANICS
MAY 1990
CIRC: 1,600,000



FRANKLIN INSTITUTE/CHRISTOPHER RANSOM PHOTO

Museums For The Future

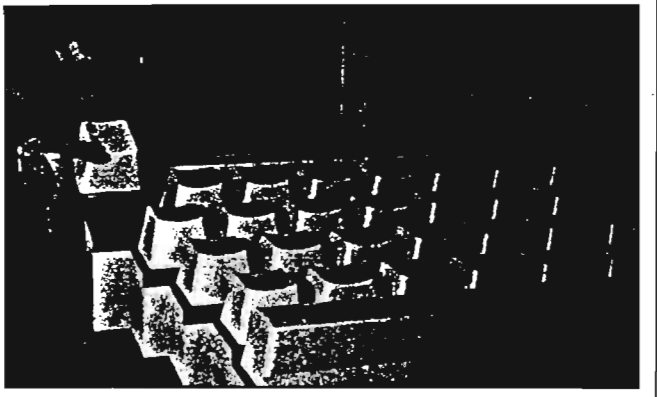
I'LL BE HONEST. A lot of museums put me to sleep. Except for the kind where you can push buttons and watch things move around, or otherwise tinker with the exhibits. Those are fun. Maybe that makes me childish, but if so, it's a kind of childishness that's sweeping the country. More and more science museums are finding ways to get visitors involved with their exhibits, and business is booming. Attendance is higher, and more new facilities are being built than at any time since the 1960s, when the *Sputnik* scare gave new urgency to science education. It's a heartening contrast to continuing reports of America's poor level of technological literacy compared to our economic competitors.

Most of the museums now springing up don't really fit the usual definition. Referred to typically as science centers, they place a heavy emphasis on teaching about science and technology, rather than simply serving as historical archives.

One of the most notable new examples is the $71-million Futures Center shown in the architect's model above. Opening this May at Philadelphia's Franklin Institute, the oldest hands-on science museum in the country, the 90,000-sq.-ft. complex of theaters and interactive exhibits is dedicated to illustrating technology's power to shape the future, and the choices that that power will oblige us to make.

Seven permanent exhibits will focus on the potential impact of science on space exploration, health, energy, the environment, information technology, materials and lifestyle. Among the items on display will be a 37-ft. walk-through mockup of Space Station *Freedom*, a giant model of a living cell, a simulated rain forest ecosystem and a scanning electron microscope visitors can look through to examine advanced materials.

An eighth exhibit, called The Future and You, will give visitors an overview and explanation of the museum as a whole. Along with the introduction, visitors get cards that identify them to a computer system with terminals in each exhibit. After providing the computer with a profile of themselves and their interests, guests carry the cards with them, and check in at the terminals for suggestions about what to see, and followup information on a variety of science topics.



Giant keyboard is assembled for walk-through computer.

Choosing the future

Rather than presenting a single vision of a future high-tech wonderland, the overall aim of the exhibits is to demonstrate the multiplicity of alternate worlds that technology might bring. Driving this point home is a 150-seat auditorium called the Future Choices Forum. Each seat is equipped with a computer-

The trackball that will control the walk-through computer.

COMPUTER MUSEUM/MICHAEL SHACKLEFORD PHOTOS

ized voting station that will let visitors respond to presentations that highlight the dilemmas we will face as our ability to manipulate nature steadily increases. Results of the votes will be projected on a large screen at the front of the auditorium and circulated to policymakers in Washington.

For many, however, the most important decision that the Futures Center can help with is the choice of a profes-sion. The Future Careers

Center will give access to resources that go far beyond what the typical school guidance office can muster. Central to the facility is an electronic version of a *Help Wanted* section from a typical 21st century newspaper. Visitors push buttons to pick ads and get a look at the accompanying job descriptions, education and experience requirements, starting and average salaries, and the number of jobs expected to be available in the selected field.

Behind the scenes

How do you design a museum to achieve all the ambitious educational goals that the Futures Center sets for itself? Speaking to Bill Booth, vice president for exhibits at the Franklin Institute, I got the sense that like any form of teaching, coming up with exhibits is as much art as science. But it also presents challenges all its own. Unlike textbook lessons, the unstructured learning that happens in a museum is nearly impossible to measure or predict. In a process Booth calls random access learning, people choose their own paths through the information made available to them, much as they do in the real world. As a result, the usual methods of quizzing people to gauge what they've taken away from the experience aren't really appropriate.

Typical ways of evaluating an exhibit include videotaping people's interaction with it, and questioning them on the concepts it's intended to convey afterward. Admittedly, such methods are imprecise, but they pick up basic flaws in a presentation. For example, surveys found that a common misconception among visitors to the Franklin Institute was that gravity was caused by air pressure. Exhibits that suggested otherwise were simply assumed to be broken. Booth's group responded by designing an exhibit that let visitors pump the air out of a cylinder and see for themselves that gravity still applied.

Over years of observation, it has been possible to extract some general principles to guide the design of exhibits. One thing that needs to be taken into account is the fact that people approach things with a variety of different learning styles. According to Booth, some like to talk, some like to interact with an object, and others prefer a more passive approach like watching a video. Ideally, an exhibit will present opportunities for all these activities.

It's also a good idea to gear an exhibit to accommodate mixed age groups, such as families. According to Bonnie VanDorn, executive director of the Association of Science-Technology Centers in Washington, D.C., such groups learn together more efficiently than groups of people who are alike. And it's not always the old teaching the young. Often, for example, a child will eagerly push buttons or manipulate an object in a way that yields surprises for adults who would have taken a more deliberate approach.

Perhaps the most basic principle of all is one that hardly needs restating in this magazine. As Booth puts it, "People like to learn by doing."

Boston's giant computer

One of the grander examples of how these common-sense educational ideas can be embraced in a single exhibit is a huge walk-through computer scheduled to open this June at The Computer Museum in Boston. Scaled up to 20 times normal size, the $1.2-million machine will incorporate a 25-ft. keyboard you step on to operate, a working, 5-ft.-high trackball and a 108-sq.-ft. monitor that displays the operation of a custom-designed hypercard program.

Aside from the sheer impact of its size, the exhibit promises to make computers understandable in a way that has up to now been maddeningly elusive to most people. Walking inside the machine reveals the network of components that makes these inscrutable boxes tick. The floor makes up the motherboard, complete with rows of memory chips and vertical expansion cards. At its center are the microprocessor brain and the clock that synchronizes the activities of all the different parts. Thrusting back from the front panel are a floppy drive and a spinning hard disk platter. Pulsing light fibers simulate connecting cables, and show how signals travel through the machine as visitors work the giant controls outside. Many of the components are equipped with viewports that let you see their inner workings right down to the most basic level. Interactive computer stations placed around the exhibit provide supplementary information.

Learning versus fun?

Certainly it's possible for people to understand technology without access to giant computers or $71-million museums. But the benefits of exposure to these carefully selected experiences should not be underestimated. "There's an incredible need to make the more symbolic things that happen in classes have a more concrete basis," says VanDorn. Abstract concepts are fragile and easily forgotten without a compelling illustration in one's own personal experience. And although the museums that put this idea into practice may seem a departure from tradition, the way they teach science is actually much more in tune with the experimental principles on which the practice of science has been based from the beginning. **PM**

Living | Arts

THE BOSTON GLOBE • SATURDAY, JUNE 2, 1990

[Circulation 509,500]

It's bigger than byte-size

By Ronald Rosenberg
GLOBE STAFF

If Hollywood were to make a sequel to the hit movie "Honey, I Shrunk the Kids," Boston's Computer Museum could be one of the sets.

Instead of riding giant ants and climbing into oversized Lego blocks, the movie characters could embark on an adventure inside and around a giant personal computer equipped with a 25-foot-long keyboard. The child-sized characters could climb the computer's letters and numbers. Adults could explore a geography program by turning a bumper-car-sized pointer, known as a trackball, that moves images on a towering 108-square-foot color monitor; using the World Traveler program, they can, for example, locate the shortest driving route between two cities.

Museum visitors are likely to feel like the shrunken kids in the film when they view the Walk-Through Computer, a new exhibit that opens this month. While there is no danger of a giant bumblebee attack, the change in perspective is momentarily startling.

"Making everything very big and very visible takes the mystery out of technology," said British-born Oliver Strimpel, the museum's executive director, who has wanted to create this exhibit for three years. "It's a very disarming approach, rather childlike."

Indeed, the electronic parts alone are 50 times bigger than an Apple Macintosh. One of the smaller parts of the exhibit, which opens June 23, is the 6-foot-tall floppy disk. It is only 21 times larger than today's 3.5-inch disk.

Visitors will be able to walk past a 6-foot-tall disc storage drive, gaze into giant memory chips and learn how information is passed from one part of this two-story computer to another.

"I want to reach out with this exhibit to people that know nothing about computers as

EXHIBIT, Page 13

Oliver Strimpel at Boston Computer Museum exhibit: "Making everything very big and very visible takes the mystery out of technology."

GLOBE PHOTO / MILBERT ORLANDO BROWN

Exhibit is bigger than byte-size

■ EXHIBIT
Continued from Page 8

well as those that have a fear of computers," said Strimpel.

To design the exhibit, Strimpel tapped Richard Fowler, who was head of design at Britain's National Museum of Photography, Film and Television. Strimpel knew Fowler from his earlier work at the Science Museum in London, where the designer created a full-scale model of a nuclear reactor core.

"We've modeled everying on a working computer," said Fowler, who acknowledged knowing nothing about computers until he came to Boston last May. "Frankly, I never cared much about them – until now."

He and Strimpel agreed that the exhibit had to give visitors a sense that computers can be fun as well as instructive. They also hope the Walk-Through Computer will bring in new visitors, given the popularity of its next-door neighbor, the Children's Museum, on Museum Wharf.

Computer Museum officials see the exhibit as a way of widening their audience beyond the computer literate, many of whom are children.

"We've seen a lot of parents coming here because of their children's fascination with computers," said Strimpel.

In addition to the giant keyboard, visitors can walk inside an oversized electronics forest and stop at 4-foot-long "chips" – memories, communications devices and a Central Processing Unit, the control center of the computer. They can peer into them through one of many viewports to see videos that show the inner workings right down to the most basic level. Walking from chip to chip, visitors will see pulsing light fibers that simulate wires to show how tiny pieces of information – data bits – zoom around in giant silicon chips.

Computer Museum officials see the exhibit as a way of widening their audience beyond the computer literate.

To further disarm computerphobes, the museum has retained Robert Macauley as exhibit illustrator. He is best known as the writer/illustrator of "The Way Things Work," a book that includes enlarged drawings of the inner workings of more than 250 machines. For the Computer Museum, he will produce 30 information panels as well as anatomical blow-ups of the computer's working parts. Macauley is also creating a 20-foot-long display studded with switches, keyboards, microphones and a television camera to explain how information flows.

This ambitious introduction to computers is costing the museum $1.2 million. Fund-raising for the exhibit was spearheaded by Mitchell Kapor, founder of Lotus Development Corp. and chairman of ON Technology, both in Cambridge. Kapor, who donated $250,000, says he's always wanted to break down the barriers to understanding computers.

With the funds in hand, more than 100 people, including 13 full-time carpenters, model-makers and electricans from F.W. Dixon Co., the Woburn exhibit fabricator, are scrambling to meet the late June deadline.

Fowler, who is returning to England to work on a new Children's Museum, said developing the Computer Museum exhibit differs from most British and American museum exhibits that take two to three years to design and build. The Walk-Through Computer will be completed in just over 12 months.

Still, there are last-minute problems, such as finding the most suitable material for the exhibit floor to accommodate the foot traffic from the 150,000 visitors expected annually. Already dozens of samples of plastic materials have been tested.

Just as a real computer's electronics sit on a multilayered plastic board, called the "motherboard," the museum is trying to build a similar green-colored floor.

"On the one hand, it's got to look right," said Fowler. "That means it's got to be a nice translucent green. At the same time, it has got to stand 10 years of wear and tear as a floor, and that's proving to be a very difficult combination."

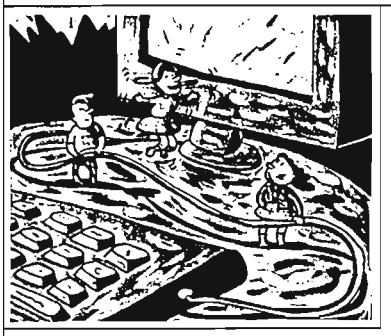
Their solution: Have people walk slightly below the electronics using flooring that can be easily replaced.

Information Processing

BITS & BYTES

EDITED BY MARK LEWYN

JOURNEY TO THE CENTER OF THE PC



For years, science enthusiasts have marveled at a replica of the human heart, the size of a house, at the Museum of Science & Industry in Chicago. Now, a Boston museum is putting a new twist on the idea.

On June 23, the Computer Museum will unveil an enormous, $1.2 million replica of a personal computer that visitors can walk through. Inside the mammoth machine are banks of Volkswagen-size, random-access memory chips and a six-foot floppy disk. Pulsing fiber-optic cables illustrate how information moves through computers. The machine's only working parts are a few buttons on its 25-foot keyboard and a trackball, a ball that moves the cursor. The computer's single trick is to map the shortest land route between two cities on the same continent. Even that function is actually performed by a desktop computer hidden inside the giant model power supply. Once the route is calculated, a slide show on the machine's 108 square-foot screen illustrates points of interest along the way.

MCI BUYS AN UNDERGROUND EMPIRE

Bundles of copper wires fatter than pythons. Wooden conduits soaked in creosote, some from the 1880s. It's a jungle down there, and now it belongs to MCI Communications Corp. Western Union Corp. spent decades laying cables beneath the streets of hundreds of U.S. cities, including 700 miles of fiber-optic lines. On Mar. 8, the cash-strapped, onetime communications giant sold it all to MCI for an undisclosed sum.

The deal for Western Union's raggedy Advanced Transmission Systems has attracted little notice, but there's more to it than meets the eye. It makes MCI the only long-distance company to own lines that extend right into customers' buildings. MCI could attract data-transmission customers by promising to shepherd their traffic every inch of the way. Still, realizing that dream on a wide scale would take lots of money for modernization and expansion, and it might be challenged by local phone companies that resent MCI's intrusion. MCI spokesman John R. Houser says the company has told shareholders it doesn't plan to invest heavily in ATS. Even so, he acknowledges, "MCI has inherited some buried treasure."

MICROSOFT IS BECOMING FLUENT IN RUSSIAN

As the U.S. government slowly lifts export restrictions on computer technology bound for the Soviet Union and Eastern Europe, companies with an appetite for new markets are scrambling to get products ready. That's why Microsoft Corp. has developed a Russian version of MS-DOS, the operating system software that runs IBM-compatible personal computers. "There is a huge demand for computing in the Soviet Union," says Jeremy Butler, a Microsoft senior vice-president.

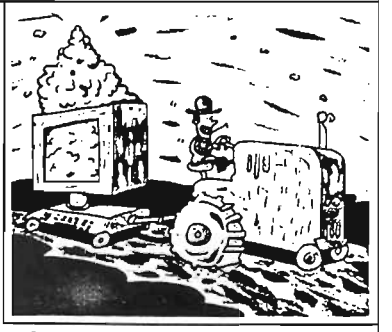
The Russian version of MS-DOS, the 13th translation Microsoft has made, should make it easier for budding Soviet businesses to computerize. Another prospect is the Communist Party, one of the nation's biggest PC users. Until now, Soviet PCs—made by the government or by importers such as IBM—have used English versions of MS-DOS or homemade translations. Working with a Soviet-American computer joint venture called Dialogue, Microsoft has developed a method to arrange Cyrillic characters on the keyboard and automatically translate them into the mathematical language used internally by PCs. That will help other software makers translate their own programs. In addition to Microsoft, Aldus Corp. and Ashton-Tate say they plan to translate applications, such as word processing packages, for sale in the Soviet Union.

IS THE MAC MAKING APPLESAUCE OF STUDENT PROSE?

The Apple Macintosh, with its easy-to-use graphics style, may represent a victory of form over substance. That appears to be the finding of research conducted at the University of Delaware. Marcia Peoples Halio, assistant director of the English Dept.'s writing program, assigned the same five teaching assistants to 10 freshman English classes. One student group used Macs, the other used IBM PCs or IBM clones.

The instructors said the Mac's large type and graphics seemed to lead to "sloppier writing and fluffier topics." A writing-analysis program of a random sampling of papers found that 30% of the Mac writers used complex sentences, compared with 50% of IBM-clone writers. Sentence length averaged 16.3 words for the Mac essays and 22.6 for those written on PCs. And the Kincaid Scale, a measure of readability, showed Mac users writing at the 8th grade level, vs. 12th grade for the IBM-clone group. Her article "Student Writing: Can the Machine Maim the Message?" concludes that the Mac's format seems to "encourage a simple sentence structure and childish vocabulary."

KEEPING UNDERWEAR COTTON OUT OF BLUE JEANS

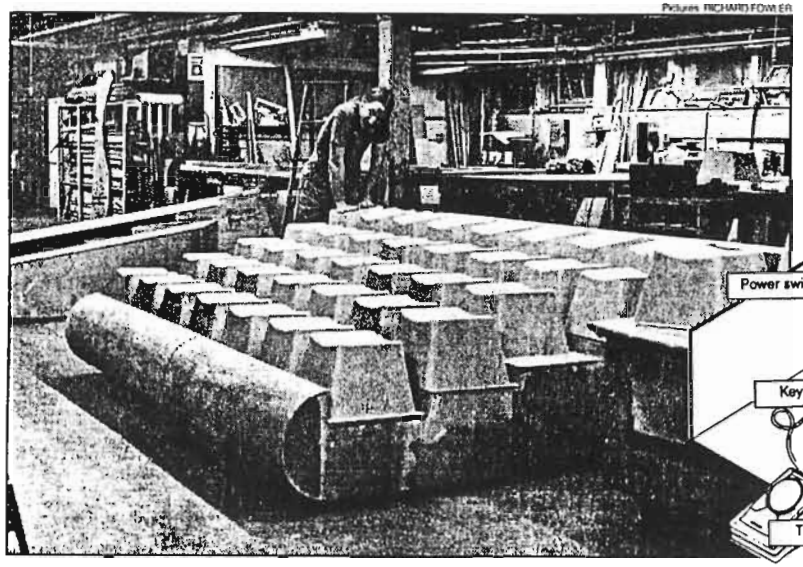


Dozens of types of cotton are grown in the U.S., and there are scores of different uses for each type. Some grades are best used for blue jeans, while others make better shirts. The trick for mill operators is knowing how to match the right cotton to the right garment.

Now, with a new software program developed by Cotton Inc., a trade group for cotton growers, grading may no longer be so tricky. The cotton is first rated by a machine known as a High Volume Instrument. The HVI checks for fiber length, uniformity, strength, color, amount of impurities, and other qualities. Then an IBM Personal System/2, which runs the new Engineered Fiber Selection Program, takes that information and determines the best use for the cotton. So far, according to the trade group, the results have been impressive. Mills report that cotton can now be classified in a matter of minutes rather than days, reducing labor costs and helping operators to adjust their inventories quickly to match market demand.

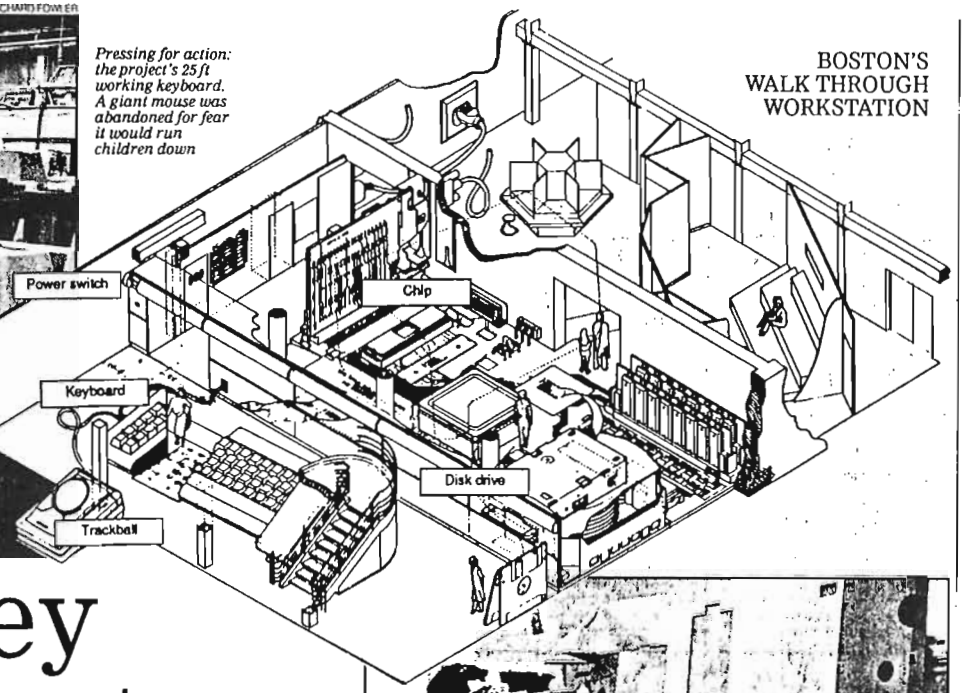
The Daily Telegraph
ESTABLISHED 1855 NO. 41,912 MONDAY, MARCH 26, 1990 FINAL * LONDON AND MANCHESTER 35p

Pictures RICHARD FOWLER



Pressing for action: the project's 25ft working keyboard. A giant mouse was abandoned for fear it would run children down

BOSTON'S WALK THROUGH WORKSTATION



The two-storey desktop computer

In Boston Roger Highfield, Science Editor, discovers plans for a 50 times lifesize PC

THE WORLD'S most expensive – and largest – "desktop" computer will be up and running in June. Costing $1.2 million (£750,000), it will be two storeys tall – 50 times the size of a normal desk top PC or workstation.

Rather than sitting on a table, it is being built in a former wool warehouse on Boston's historic waterfront, home of the world's only dedicated computer museum.

The Walk Through Computer exhibit will provide a view of computers that even a computer hardware expert will find breathtaking. It is the brainchild of a Briton, Dr Oliver Strimpel, the museum's newly appointed executive director.

"The Walk Through Computer will be about the technology itself, where you can learn how it works and what is inside the computer's box in a way that we hope will not alienate anybody," he said.

The impact of computers and their difference from, say, a dishwasher, are not appreciated, according to Dr Strimpel. "The idea that computers are information machines is very subtle" he said.

"I do not think people realise that almost everybody is involved with handling and manipulating information while relatively few are involved with manufacturing."

Two other Britons are playing a key role: Richard Fowler, the award winning designer from the National Museum of Photography, Film and Television in Bradford, and BBC producer John Palfreman who will make a humorous film explaining software.

Overall, more than 100 people and 25 institutions from three countries are collaborating on the project.

The Walk Through Computer will demonstrate a program that takes the museum's visitors on a world tour.

Images of the world on a high resolution computer screen will be projected on a 108 sq ft monitor. It will also offer visitors a 25 ft working keyboard and five foot floppy disk.

Ideas for a giant mouse were dropped because it would have been the size of a bumper car, and, Dr Strimpel explained: "We were scared of running over children."

Instead users will turn a "trackball" 40 in in diameter to point a cursor to one of 300 major cities displayed on screen.

The computer will find the shortest land route between two of them and offer a slide show on the mammoth monitor of the sights one would see en route.

The computer operating the screen display will be an Apple Macintosh II, and a powerful Digital Equipment Corporation Microvax will control the special effects.

Walking inside the computer past drooping ribbon cables, visitors will see it operating in slow motion, from the whirr of a giant spinning disk as it retrieves data to the frenetic electronic activity in banks of memory chips.

Peering inside, they will see a film of a real chip at work taken with an electron microscope at DEC.

The action of the computer will be described in the simplest language: each sliver of silicon lights up in a chip that is "as complex as a city".

Computer graphics will also be used. "You will appear to fly down into the chip and see it working in a realistic way," said Dr Strimpel.

"We want people to see it is complex but feel that if they had the time they could understand it. It is not a mystery – there is no ghost in the box."

In case this realistic approach intimidates some visitors, there will also be a "warm and fuzzy" display: humorous illustrated panels will be used, produced by David Macaulay, author of The Way Things Work.

Pulsing light fibres embedded in its translucent floor – a mock printed circuit board – will simulate the flow of data through the computer.

The Walk Through Computer is the Boston museum's largest single project since opening in 1984.

The museum boasts one of the best collections of early computers. The size of this exhibition underscores the soaring power and plunging price of the machines.

Giant floppy: George Vanikiotis, exhibit fabrication project manager, inspects a five foot high replica of a computer disk

A marvellous selection of hands-on exhibits, computer animation, robotics and artificial intelligence, is also on offer to its 100,000 visitors each year.

They can hear advice from a computer on what wine will complement a fish dish, argue with a grocer (an artificial intelligence program) over the cost of strawberries or even commission a work of computer art.

"Computers are also a wonderful vehicle for getting over some extremely deep mathematical ideas," Dr Strimpel said.

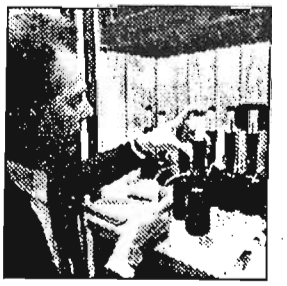
Before joining the museum, Dr Strimpel was curator for mathematics and computing at London's Science Museum, but in 1983 lack of resources and focus on scholarship rather than public education there pushed him to move to Boston.

The New York Times

THE NEW YORK TIMES **LIFE STYLE** SUNDAY, MARCH 4, 1990

Circ: 1,593,100

LIFE STYLE 38



Walk-Through Computer

The Computer Museum in Boston plans a two-story mock-up of a computer that visitors can walk through, page 40.

WEDDINGS 48

Computers on Display But Not on a Pedestal

Special to The New York Times

BOSTON, March 3 — At the Computer Museum here, the technologically timid can consult with a wine adviser about what will complement a chicken dish, commission an original work of art or dicker with a Haymarket street vendor over the price of a pint of strawberries.

Computers that do these things are part of a growing number of interactive exhibits at a museum that bills itself as the world's only one devoted exclusively to computers and their history. The mission of the 53,000-square-foot museum is not only to preserve important examples of computers from the industry's relatively short history, but also to educate and inspire a public that sometimes finds computers threatening.

"We try to combine artifacts with hands-on interactive systems," said Dr. Oliver Strimpel, executive director of the museum. "You can come see the first computers, what they're like and the incredible revolution taking place and also see what they're used for, why they're so unique and why they're so different from any other machine that's ever been built."

Computer Rescued From Dump

The museum's collection started in 1974 when Ken Olsen, president of the Digital Equipment Corporation, and Robert Everett, then president of the MITRE Corporation, rescued the Whirlwind computer of the Massachusetts Institute of Technology, an early vacuum-tube device and the first computer designed for manufacture, from a truck that was carrying it to the dump.

Mr. Olsen and Digital began collecting and saving important early computers. The Computer Museum, which became an independent nonprofit organization in 1982 and receives about 100,000 visitors a year, now has some of the most rare examples of vintage computers among its collection of 1,500 artifacts.

> A museum strives to make its artifacts interactive.

Perhaps the most exciting of the museum's 60 interactive exhibits so far is the planned $1.2 million "walk-through computer." Visitors will be able to walk past spinning six-foot disc drives, peer inside giant memory chips and watch a 108-square-foot monitor, about 20 times normal size. The 3,500-square-foot exhibit is two stories high. It is scheduled to open on June 23.

Tony Fernandes, 26 years old, a senior programming engineer at the Lotus Development Corporation, said he visits the museum to satisfy his curiosity about the computer's history, but he also volunteers his time helping to design the walk-through computer because he thinks the public needs to understand the impact of computers.

"It's like a moon rocket; you know it went there, but you wonder how it got there," Mr. Fernandes said. "People go to the museum almost as an oracle to get told."

From its earliest days, the museum has maintained a collaborative relationship with the area's high-tech industry and colleges and universities that helps it stay abreast of new developments. The museum offers a breakfast seminar series to its corporate members. It conducts a work-study program with Northeastern University, and students from M.I.T., Boston University and Harvard often work at the museum, sometimes in connection with their theses or for other college credits.

Dr. Strimpel said that when the museum was designing its "smart machines" exhibit, which includes a collection of 25 robots, about 30 employees from the computer industry volunteered to help. "They enjoy having their work be very visible," Dr. Strimpel said. "It's an opportunity to get it seen by the world and feel like they're doing a great thing."

For the record 5/2/90

Correction: Because of a photographer's error, a photo caption in Monday's Business section incorrectly stated John Doerr's position in last Friday's Computer Bowl in Boston. Doerr was captain of the West Coast team.

Business

Circ: 509,500

THE BOSTON GLOBE • MONDAY, APRIL 30, 1990

Mitch Kapor of On Technology plays "The Examiner" at The Computer Bowl.

Silicon Valley gets its revenge

West Coast wins Computer Bowl

By Jane Fitz Simon
GLOBE STAFF

It was "Revenge of the Silicon Valley Nerds" as the West Coast squeaked past the East Coast in a thrilling upset at the Second Annual Computer Bowl, held Friday night at the World Trade Center.

The closely fought contest, which pitted East Coast and West Coast computer professionals in a computer trivia quiz, climaxed in a photo finish with the winner decided on the final question.

East Coast fans went limp when Lawrence Tesler, vice president of advanced technology at Apple Computer Inc., correctly guessed that it was the caves of Tennessee that inspired the maze of twisty passages in the computer game, "Adventure." The answer gave the West a 300 to 290 win, and claim to the title, "Computer Masters of the Universe."

True to form, the West Coast team gloated over its victory. "The defeat of unknown nerds from failing East Coast companies was inevitable," proclaimed John L. Doerr, the West Coast team captain and a partner at the venture capital firm of Kleiner Perkins Caufield & Byers.

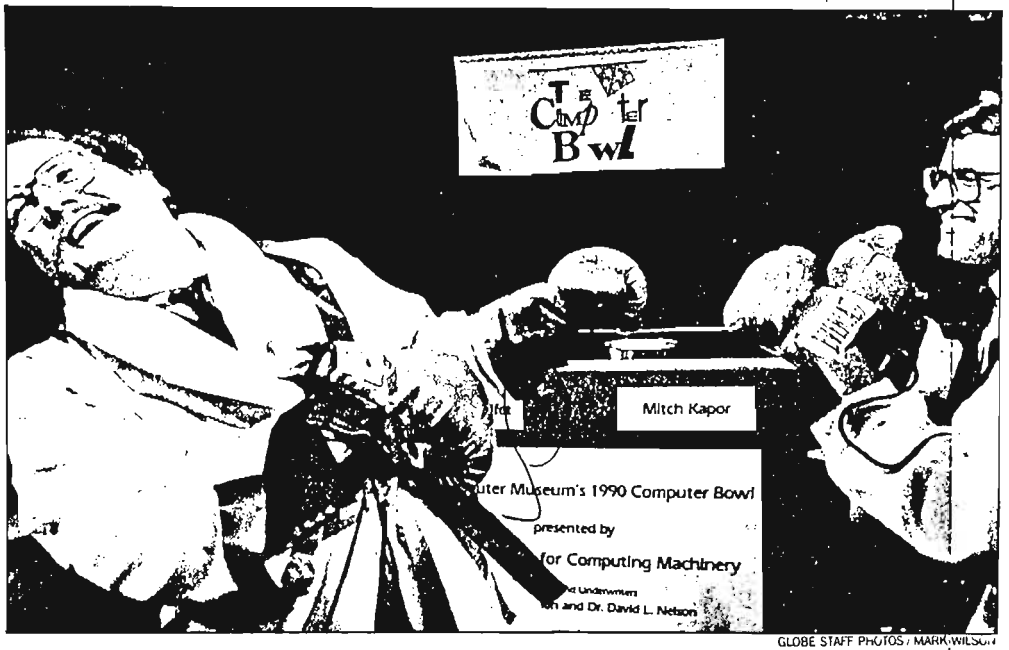
The East Coast loss meant the custom-made, satin victory robes ordered by team captain Patrick McGovern, chairman of International Data Group, in Framingham, remained on their hooks. A West Coast player taunted: "Where are the robes?"

McGovern held his head high – and complained that his team lost on questions that involved computers featured in cartoon strips and movies. "If we had been given a chance to answer authentic computer questions, we would have had a chance," he sniffed.

The win by the cocky West Coast team – which included William Gates, chairman of Microsoft Corp., of Redmond, Wash., whose scowling expressions at contest officials rivaled those of tennis star John McEnroe – sends the Computer Bowl trophy to California, where next year's Computer Bowl will be held.

The event, sponsored by the Computer Museum in Boston, raised $250,000 in cash and $400,000 in services for the museum. It was broadcast live to locations in San Francis-

BOWL, Page 18



GLOBE STAFF PHOTOS / MARK WILSON

Combatants Stewart Alsop (left) of the West team and the East's John Doerr duke it out in The Computer Bowl.

Silicon Valley team gets Computer Bowl revenge

■ BOWL
Continued from Page 17

co, Santa Clara, Calif.; Seattle, and Dallas, and will be broadcast in two parts next month on Computer Chronicles, a PBS television series.

The festive evening began with a "tailgate party," complete with cheerleaders borrowed from Dedham High School. A star-studded computer crowd enjoyed cocktails and hors d'oeuvres, including this year's judges, J. William Poduska, chairman of Stardent Computer Inc., of Newton, and William Joy, vice president of research and development at Sun Microsystems Inc., of Mountain View, Calif. The two faced off at the first Computer Bowl, held in 1988, which the East won handily, 375 to 310.

Also mingling in the crowd was Mitchell Kapor, chairman of ON Technology Inc., of Cambridge, who scored the most points at the last Computer Bowl – and was kicked upstairs this year to ask the questions. Kapor said the key to his success in the last contest was to study computer literacy books – and know when to push the button. "If you wait and only hit the button when you know the answer, it's too late," said Kapor. "You have to hit it when you know you're going to know."

Downstairs in separate "locker rooms," the teams held their final huddles. In the East Coast camp, confident players cracked jokes and asked for more guacamole. McGovern quipped that his team's strategy was modeled after the San Francisco 49ers: "We have the first 15 answers ready," regardless of the questions, he said.

Later he cautioned his teammates: "We musn't push the button before he starts to ask the question." But William Foster, president and chief executive officer of Stratus Computer Inc., in Marlborough, disagreed: "If we get a big lead, we ought to do it – to rub it in."

Robert Frankston, chief scientist at Lotus Development Corp., in Cambridge, observed that the average age of the East Coast players was 10 years older than those on the West Coast. McGovern shot back: "They have a lot of energy, but no stamina."

Rounding out the East Coast team were Russell Planitzer, chairman of Prime Computer Inc., in Natick, and Edward Fredkin, professor of physics at Boston University. Planitzer offered a final, brilliant piece of advice: "Don't press the buzzer unless you know the answer," he urged.

In the West Coast locker room, Team captain Doerr peered intently into a laptop computer and fired practice questions to his group. "They said it wasn't open book, but they didn't say it wasn't open computer," he quipped.

An excited Bill Gates sat at the edge of his chair, stabbing errantly at Doerr's questions. Gates paused to explain the West Coast strategy. Tesler, of Apple, was responsible for questions about artificial intelligence and academia. Doerr was in charge of "chips and anything that has to do with money." Stewart Alsop, editor of PC Letter, was in charge of industry gossip, while Charles House, general manager of software engineering systems at Hewlett-Packard Co., was to cover minicomputers and history. Gates would handle software.

The uppity Silicon Valley team managed to unnerve the East Coast before the first question was asked. When the time came for the West Coast players to appear on the set, each had shed his jacket and tie, and Doerr appeared in sunglasses. The team members made a show of rolling up their sleeves, and practiced lurching for the buzzer. The East Coast team looked as stuffy by comparison as a minicomputer to a Mac.

The psych-out worked. The West jumped to an early lead when Tesler correctly named three famous personal computers introduced in the summer of 1977. (The TRS-80, Commodore PET, and Apple II.) Doerr next correctly guessed the three computer companies that jointly announced the Ethernet networking standard in 1980 (Intel Corp., Xerox Corp., and Digital Equipment Corp.)

The East Coast got on the scoreboard when Foster of Stratus identified Apple as the company that went public in 1980 with the largest public stock offering at the time since Ford Motor Co.

The East Coast blew a precious opportunity when it missed three bonus questions worth 10 points each. The team could not guess which computer Mark learns to program in the comic strip Doonesbury (A Digital PDP 11/70); which PC Oliver Wendall Jones has in the comic strip Bloom County (the "Banana Junior"); and what computer Jones had before the Banana Junior (an IBM 6000).

The East Coast nonetheless led 50 to 30 at the end of the first round, and it still led at the end of Round 2, 120 to 110, having answered such questions as "What is the ASCII decimal equivalent for the escape key?" (Frankston: "27.")

As the fourth and final round opened, the East Coast team still led 200 to 170. But Gates warmed up, answering correctly that the Atanasoff computer was developed at Iowa State College, and buzzing faster than anyone on the easy question of which unsuccessful computer preceded the Apple Macintosh (Lisa).

The score climbed on each side, until there was time for just one more question – the cave question. The West got it right, and took home the trophy.

The next Computer Bowl is scheduled for April 26, 1991. The East Coast captain will be Pamela McCorduck, an author who has written on the history and future of computing, and Heidi Roizen, president of T/Maker, a California software company.

McGovern, still stewing over the missed bonus round – and that cave question – offered this advice to next year's captains: "Get videos of all the computer-related movies and sketches of all the cartoons. And study spelunking."

West Coast Nerds Beat East Eggheads In Computer Bowl

* * *

Microsoft's William Gates Is Trivial in the Contest; Key to the ASCII Escape

By JOHN R. WILKE
Staff Reporter of THE WALL STREET JOURNAL

BOSTON—In the game show, as in life, the West Coast computer nerds beat the East—following a close contest that was decided in a sudden-death finish.

The storied rivalry between Silicon Valley's laid-back computer wizards and the buttoned-down businessmen of Boston's flagging Route 128 region was reflected Friday in the second annual Computer Bowl. The Boston Computer Museum benefit, modeled after the College Bowl game show, featured an all-star cast including William H. Gates, reformed hacker and billionaire chairman of Microsoft Corp., and Mitchell Kapor, trivia whiz and founder of Lotus Development Corp.

The East Coast team, captained by Patrick J. McGovern, chairman of International Data Corp., maintained a slim lead through much of the contest, fielding the most obscure computer-trivia questions. Bob Frankston, co-developer of the first electronic spreadsheet and chief scientist at Lotus, was the East's Most Valuable Player.

The rapid-fire questions ranged from real softballs (E-PROM, as any nerd knows, is an erasable-programmable read-only memory) to the truly arcane (Q: What's the ASCII equivalent for the 'escape' key? A: 27). Mr. Frankston, clad in the dark business suit that was the uniform of the East, knew that one. The West wore shirt-sleeves.

The West's big gun, Mr. Gates, didn't turn out to be much of a factor, though he delivered in a couple of clutch situations. He was hot in a warm-up round before the Bowl—to be broadcast nationwide on PBS's Computer Chronicles in May—but the East took the preliminary. There was some speculation that the warm-up loss was a set-up by the wily Mr. Gates, and someone from Microsoft was indeed seen taking bets.

It was a bitter defeat for the East. It's bad enough that the momentum in the industry has shifted to the West and smaller, more nimble machines, leaving Eastern firms bleeding. This was personal.

After trailing most of the game, the West seized the lead in the fourth quarter. The East tied the score in the final seconds, but the West won at the buzzer. The coveted silver Computer Bowl was handed over to the Californians. "The defeat of unknown nerds from failing East Coast companies was inevitable," said West Coast captain and venture capitalist L. John Doerr, who couldn't resist rubbing it in.

THE WALL STREET JOURNAL
APRIL 30, 1990
CIRC: 1,931,410

The
Computer
Museum

300 Congress Street
Boston, MA 02210
(617) 426-2800

Memorandum

to: **The Computer Museum Board of Directors**
from: Oliver Strimpel
re: miscellaneous
date: 5/15/90

Please find enclosed the minutes of the February 16 meeting of the Board, as well as minutes of Executive Committee meetings of February, March, and April.

Note that at the February Board meeting, the **start time for the June 22 meeting was changed to 8:30 am.**

Following discussions with the Nominating Committee, a short list for this year's nominations to the Board was agreed at the last Executive Committee meeting; a list with affiliations is enclosed.

The Walk-Through Computer development is nearing completion. I enclose the latest couple of issues of our "Insider's Report." We look forward to your reactions on June 21 at the special preview party starting 6:30pm. The invitations will be in the mail within a few days.

Olivier Strimpel

Board of Directors Nominees

name	Title	Business	State
Belove, Ed	VP	Lotus	Ma
Bergstein, Mel		Computer Sci Corp	Il/Ca
Brown, Owen			Ca
DEC Nominee	VP	Digital Equipment Corp	Ma
Henderson, R or Waite,C	Partner	Greylock	Ma
Higgins, Bob	Partner	Highland Capital	Ma
House, Charles		Hewlett Packard	Ca
Kaplan, David	Partner	Price Waterhouse	Ma
Landman, Fritz	Pres	ComputerWorld	Ma
Pampel, Roland	Pres	Bull	Ma
Ruopp, Dick	VP	TERC	Ma
Simmons, Michael	VP	Bank of Boston	Ma
Sutter, James	VP	Rockwell	Ca

5/15/90

THE COMPUTER MUSEUM

Board of Directors Meeting

MINUTES

February 16, 1990

I. **The meeting** was called to order by Gardner Hendrie, Chairman. Other directors in attendance were: C. Gordon Bell, Gwen Bell, Lawrence S. Brewster, Richard P. Case, David Donaldson, Max Hopper, Theodore Johnson, James McKenney, Laura Morse, Russell Noftsker, Nicholas Pettinella, Jonathan Rotenberg, Jean Sammet, Edward Schwartz, Hal Shear, Irwin Sitkin, and Ron Smart. Also in attendence were Oliver Strimpel, Executive Director, and James S. Davis, Clerk.

It was noted that the time for the June 22, 1990 annual meeting will be changed to 8:30 a.m. instead of 9:00 a.m. The following meetings will be Thursday, November 1, 1990 at Noon and Friday, March 1, 1991 at 8:30 a.m.

II. The Search Committee Report. The report was given by Gardner Hendrie in the absence of David Nelson. It was noted that Fenwick Partners had been retained by the Museum to carry out the search for a new Executive Director. Qualifications looked for were experience in management, including association with museums, or at least with other non-profit organizations with an educational mission; experience with fund-raising; and an orientation toward and

enthusiasm for computer technology. Ninety-three individuals were contacted. The list was narrowed in several stages; and finally Oliver Strimpel was selected unanimously.

III. Perspective from the Executive Director. Oliver Strimpel summarized the progress made by the Museum in its ten years of existence, and eight and one-half years as a legally organized non-profit corporation. He noted that only seven years ago it moved into its present space. While over half of the opening exhibition reflected mission was to preserve the artifacts of computer history, the Computer Graphics and Personal Computer Exhibits focused on the applications of computers. These popular and interactive exhibits started the trend away from the featuring of historic artifacts.

The travelling Computers in Your Pocket Exhibit represented a step forward as the Museum's first national outreach. The Smart Machines Exhibit which opened, combine an entertaining approach to history, with the Robot Theatre and Ninteractive educational computer-based exhibits, helped the Museum's popularity grow. The annual Kids Computer Fairs have helped reach younger audiences; and the SIGGRAPH Art Show drew a new audience which had less interest in computing per se than the computer art. The Computer Bowl, the most successful fund-raising and media event for the Museum, has been established as an annual activity. The Walk-Through Computer Exhibit currently being assembled will

represent the largest budgeted and most complex exhibit to date, with the greatest number of consultants involved in producing it.

Although the rate of attendance has steadily increased, there are still many days when the Museum is well below capacity and there is much room left for growth. Corporate membership also needs to increase. There were two significant jumps in 1986 when the breakfast seminar series began and in 1989 as a result of the Computer Bowl. In the Capital Campaign the Museum has not made the progress hoped for. For the last few years major gifts have been channeled into its operating fund and the payment of the mortgage, that was assumed in 1988.

Strimpel noted that of the components of the Museum's mission, its educational function was the most expensive, but was also its justification for being in Boston in its present location, since the mere preservation of the artifacts could be achieved in a warehouse. He noted that the development of resources at the Museum for research purposes was just beginning: it is laying the groundwork with, among other things, its collection of archives.

IV. The Nominating Committee's Report. David Donaldson presented the report of the nominating committee and a summary of that report is attached as Exhibit A. He requested that each board member report back to the Executive

Committee by the first week in March with at least one suggestion for a potential new board member. The nominating committee will review their proposals, followed by the Executive Committee at its March 27 meeting and send them back to the Board of Directors for their feed-back. At its April 18 meeting, the Executive Committee will further review the nominations and approve the proposed slate. A recruitment period will follow and the final list will be sent to the Board of Directors on May 3 with the new members being invited to attend the annual board meeting on June 22, together with associated events.

V. Museum's Operations Report. Oliver Strimpel reported on the Museum's operations. He stated that in the first six months of the current fiscal year the Museum had done extremely well with its operating fund budget and was well ahead of budget in terms of admissions, store sales and income from functions (the functions being the most profitable operation for the Museum in terms of returns vs costs). (See the attached Exhibit B dealing with various aspects of the operating budgets and financials.) There is a new store manager and the store is doing very well. One problem has been cuts in school bus funding by the Commonwealth of Massachusetts, which has kept admissions lower than they might have been. He noted that membership goals may not be reached for the fiscal year, and that whether the restricted

contribution goal is reached will depend upon the success of the Computer Bowl. Unrestricted contributions have reached the present level in part due to significant gifts to the Museum earlier this fiscal year by Board Members to help it through a cash flow crisis. (The IMS grant referred to is a $75,000 grant from the Institute for Museum Services which may not be recurring.) He also noted that the funding of the Walk-Through Computer exhibit is currently "sheltering" some expenses by having some of the staff's time being charged against the budget for the exhibit.

The capital fund has been successful in terms of fund-raising for exhibits but not in terms of fund-raising for capital endowment.

Regarding exhibits, he mentioned that a display of four computer classics has been introduced to help fill the gap in historical exhibits between the opening of the Walk-Through Computer exhibit and the opening of the Milestones Exhibit in 1991.

An agreement has been reached with the Boston Computer Society for opening the Computer Discovery Center.

Educational materials are being developed to accompany the Walk-Through Computer Exhibit. The first assignment of the new marketing director, Noel Ward, would be to market the Walk-Through Computer Exhibit in an effort to maximize attendance and publicity.

Jean Sammet requested that the time-line exhibit be preserved, a request which was seconded by Gordon Bell.

Strimpel felt that the Museum's educational mission should be advanced to assure that the Museum's visitors receive the maximum advantage possible from their visits to the Museum (for example, by reaching Spanish speaking visitors) and a greater effort should be made to reach those who cannot come to the Museum.

Jean Sammet requested that an organizational chart and a list of the staff members be prepared for the Board.

VI. The Development Committee Report. Gardner Hendrie noted that last summer's cash flow problem led to the formation of three new development committees: Annual Fund, Corporate Membership, and Individual Membership. The Capital Campaign for the first six months of the fiscal year has taken a back seat to Operating Fund. A group is at work on trying to restructure the Capital Campaign, and is expected to report to the Board at the June meeting.

Hal Shear reported for the Annual Fund Committee. He mentioned that the goal was double that of last year and that it had been 60% achieved, which he felt was a good result. He felt that the goal should be met after the spring telethon. He mentioned that he is one member away from having 100% support from the Board of Directors.

Laura Morse spoke for the Corporate Membership Committee, stating that the results are not particularly

good (due partly to the economic slow down), but she felt things may be turning a corner to become more positive. A Membership Coordinator had been lacking but the Museum now has a new one. She noted that the Breakfast Seminars continue to be a great success.

Larry Brewster, speaking for the Individual Membership Committee, stated that they were 40% of the way toward reaching their revised goal of $67,000 for the fiscal year. He mentioned the telethon which is planned for March to help increase membership. Gordon Bell asked whether the Museum could more aggressively sell memberships at the door. Jan Del Sesto answered that it will be part of the interpreters' job to promote membership and the visitors will be asked at the door and in the Museum's store whether they are members.

Jan Del Sesto spoke about the Computer Bowl indicating that it will provide $250,000-$350,000 of free advertising for the Museum which it cannot afford to buy. The 18 media sponsors will provide high visibility as well as revenue for the Museum, and will also provide the Museum with an opportunity to return to the sponsors in the future for additional support. There will be a video tape made of the Computer Bowl which will be available at the store for sale for $40.

Gardner Hendrie suggested having a drawing for Museum visitors which would offer a prize of two free Computer Bowl

tickets which would enable the Museum to get names and addresses of potential new members. He also expressed thanks to Jan Del Sesto and to the Committee Members mentioned above for their work in sustaining the Operating Fund income.

VII. The Finance Committee's Report. Nick Pettinella indicated that the Museum's cash position has improved due to gifts from the Board of Directors when the Museum was having cash flow problems and due to the support available for the exibits.

The funds of the Museum have been moved from Bank of New England to Bank of Boston, BayBank and State Street.

Richard Case noted that it was important for the Museum to show an operating surplus and to stop borrowing from the from other funds. Irwin Sitkin noted that he would like to see an Endownment Fund created. Gardner Hendrie noted that that was the goal of a group working on the Capital Fund program which is trying to develop a national campaign for endowment. Gordon Bell suggested that the value of the in-kind gifts be shown as an asset on the financial statements.

Jan Del Sesto noted the good public relations being derived from the Computer Bowl, from coverage in Popular Mechanics magazine, and from British Airways' mention of the Museum in its video city-guide to Boston (shown at the meeting).

VIII. Oliver Strimpel discussed goals for the Museum in 1991.

The 1991 operating budget is expected to compare favorably to the 1990 budget when one considers the $50,000 operating grant from DEC (part of a major $450,000 multi-year grant) and expected increased admissions, store sales and functions resulting from the Walk-Through Computer Exhibit. Negative factors include the fact that a renewed grant from the Institute for Museum Services is uncertain and there will be less shelter provided for other staff costs once the Walk-Through Computer Exhibit has been completed. He noted that the Milestones Exhibit may not be as well funded as the Walk-Through Computer Exhibit. In addition, in 1991 there will be no vacancies on the staff which means increased salaries over those paid in 1990.

Ed Schwartz suggested that admissions be increased before the Walk-Through Computer Exhibit opens, since the Museum is below market level. Also he felt that the store should be prepared in advance for the expected success of the new Exhibit. Some suggestions for raising more money included having more varied functions at the Museum, and not just renting out its space (for example, bringing in telephone company employees to help them develop basic computer literacy); production of books and videos relating to the Walk-Through Computer Exhibit; selling franchises for

that Exhibit; using the Museum as a set for commercials and educational films, etc.

Ed Schwartz suggested enlarging the kitchen so that the facilities for functions could be improved. Hal Shear suggested that the lines of visitors expected to develop when the Exhibit opens could offer an opportunity for sales possibilities. Irwin Sitkin suggested that travelling exhibits be listed in the Museum's newsletter.

IX. Report on the Walk-Through Computer Exhibit. Oliver Strimpel summarized the progress in developing the exhibit to date. He noted that the application of the computer, called "World Traveller", will relate to finding routes between cities. Funding is currently at $827,000. The thrust of the Exhibit is "How Does a Cpmputer Work?" Gordon Bell suggested that the Museum might sell bags of some discarded computer parts which could be furnished to it free in great supply.

Noel Ward spoke about marketing for the Exhibit which should begin four to six weeks in advance of its opening. He plans to develop innovative advertising and to appeal to various groups. Advertising media may include posters, broadcasts, a blimp, and direct mail. Three national TV programs want to film at the Museum. The Museum may begin to cultivate interest by allowing selected visits to the warehouse where the Exhibit is being developed. There will

be two or three different opening nights for the Exhibit, geared to various groups.

X. Adjournment. There being no further business to come before the meeting, upon motion duly made and seconded, it was

VOTED: To Adjourn.

Adjourned.

A true copy.

Attested:

_____

James S. Davis, Clerk

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THE COMPUTER MUSEUM

Executive Committee Meeting

MINUTES

February 28, 1990

Present were Oliver Strimpel, Gardner Hendrie, Ed Schwartz, David Donaldson, and Nick Pettinella.

Oliver Strimpel noted that the Computer Bowl funding, presently at a level of $154,000, was behind in January and February and had only reached roughly one-half of the $322,000 budgeted. Half of the balance which is needed is considered "fairly certain" to come in. Forthcoming ads for the Computer Bowl should help raise funds. Fund raising for the Bowl is currently Jan Del Sesto's top priority.

The capital campaign is still well behind; although funding for the Walk-Through Computer has exceeded its budget goal with some $100,000 still potential. It is still on target for its opening date. The Milestones Exhibit is just over half funded.

A $95,000 grant from the National Science Foundation has been awarded for the Exhibit Kit program, although official confirmation is still awaited. This is the second federal grant received by the Museum this year and shows that it can compete nationally with top museums for funding.

There was a discussion as to whether and when admission fees should be raised from the present $5.00 to $6.00. This will be further discussed at the next committee meeting on

March 27, but there seemed to be a general consensus that the increase was desirable and that it should start before the Spring visitor season begins and well before the Walk-Through Computer Exhibit opens.

The composition of the Executive Committee was discussed and it was noted that some of the current members have been serving on the committee or in other capacities with the Museum for many years; that they could not be expected to continue indefinitely; and that new members were needed. It was determined that some current members of the Board of Directors would be approached about serving on the committee.

Oliver Strimpel presented some preliminary plans for Museum activities for fiscal year 1991, and budget goals for that year. The Committee will consider his proposals for later discussions; but one of the immediate comments was that more should be added to focus on school groups and educational outreach. The role of the Museum's educational program manager was also discussed.

Gillian Ley will draft a letter to be sent to the Board members to solicit their suggestions for new members of the Board, as were requested at the recent Board meeting.

Ed Schwartz suggested that the Museum consider becoming acredited.

Gwen Bell joined for discussion of long range planning for the Museum. There was general discussion centering around the idea that what the Museum needs is not so much a vision of itself 25 years from now, but a plan to enable itself to go from its present status into the future in a healthy condition. Gwen is continuing to explore the issue of what group should be in charge of developing this plan and who should be at its head.

There was a comment that future planning should probably see a shift of emphasis somewhat more into the direction of the capital campaign, after the success in the past years with developing and funding exhibits.

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THE COMPUTER MUSEUM

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

March 22, 1990

In attendance were Oliver Strimpel, Ed Schwartz, Nick Pettinella, Gardner Hendrie, Lynda Bodman, and Jim McKenney.

Oliver Strimpel referred to the Museum's unrestricted short-term capital fund goals which have been revised downward from $400,000 to $220,000. At this point only some $60,000 has been received, so that this presents a major cause of concern. The Computer Bowl is also behind where it should be in funding, but Jan del Sesto is confident about its achieving its goals. The income from the store and from functions at the Museum, and the fact that there have been empty positions, have given some support to the short term financial picture. One major problem is that there have basically been only two "askers" for capital funds: Gardner Hendrie and Gordon Bell.

Exhibit funding has been successful. It is hoped that the funding of the exhibits will build support for gifts to the Museum as a whole in the future.

Gardner Hendrie agreed that the focuses this year have been on funding of exhibits and operating expenses, and that the capital campaign has suffered as a consequence. Committees are now being developed to focus upon the capital campaign.

Lynda Bodman suggested developing gala VIP events for the Walk-Through opening; Jim McKenney suggested an afternoon preview for parents and their children oriented towards children; and there was suggestion of involving city officials. One suggestion was to hire a not-for profit event consultant in connection with the opening events.

Oliver noted that as of April 1 the Museum admission would be raised to $6.

Brian McLaughlin, business manager, is temporarily taking over finance and administration responsibilities; and Jim McKenney suggested that a general assistant to the Museum Director was needed.

Of the $825,000 budget for the walk through computer, $65,000 is currently sheltering operating expenses.

The Milestones Exhibit is half funded. Seed money has been received to explore the possibility of a Virtual Reality travelling exhibit which would create very high visibility for the Museum around the country.

A summary of goals for the 1991 fiscal year budget (attached) was circulated for further discussion and development.

Ed Schwartz emphasized the importance to the Museum of hiring the proper staff, and felt that the necessary ideas to keep the Museum alive and growing would then take care of themselves. Ed also emphasized that he felt the better philosophy was to be conservative in setting the Museum's

goals and to continue to grow, rather than to be aggressive and become weaker financially.

There was general consensus that the museum needs a new head of its educational programs and more educational outreach.

A summary of considerations regarding governance of the museum was circulated (attached). There was discussion of whether the two Board meetings a year might be sufficient. It was felt that there needed to be a more energized Board. The need to inspire repeat annual corporate giving by working through the Board members was recognized.

It was felt that Irv Sitkin as head of the Nominating Committee should be urged to move the nominating process forward.

Gwen Bell and Jan del Sesto joined to discuss the capital campaign. There was a proposal of a structured committee approach in which different committees would focus on different fund raising sources. The goal was to diversify responsibility for the capital campaign drive. One suggestion was to start the endowment drive after the anticipated success of the Walk-Through computer, and possibly to present the proposal to the Board meeting in the Fall. It was emphasized that attention to this project should not be allowed to divert the needed energy from the opening of the Walk-Through exhibit.

THE COMPUTER MUSEUM

Minutes of the Executive Committee Meeting
April 18, 1990

In attendance were Oliver Strimpel, Ed Schwartz, Gardner Hendrie, Nick Pettinella, Lynda Bodman, Jim McKenney and David Donaldson.

1. FY-91 Preliminary Budget.

Oliver Strimpel produced preliminary figures for fiscal-91 for the operating and capital budgets.

With regard to the operating budget, he indicated that the FY-90 budget would come close to being balanced due to some major individual gifts. For FY-91 he anticipated a significant increase in admission income due to the Walk-Through Exhibit and the increased admission charge. He felt the novelty and excitement of The Computer Bowl would make it a good fund-raiser for a few more years to come and has budgeted its receipts at $300,000 for FY-91.

The positions of Director of Finance and Administration and of Education Director have been eliminated from the '91 budget. Jim McKenney questioned whether the position of a Director of Finance and Administration should not be retained to allow Oliver to focus more of his attention on exhibits and fund-raising rather than administration. Oliver, however, indicated that he would prefer having an assistant to the Director of the Museum as a means for cutting salary costs. He is also suggesting the creation of a new position

of a Director of Public Programs which would combine the oversight of the exhibits and education programs since they both involve public education functions of the Museum. Gardner Hendrie indicated concern about doing so since he felt that the education program (as opposed to exhibits) might be hurt by comparison, due to Oliver's and the Museum's strong track record on exhibits. Oliver, however, felt that the approach not only saved money but also followed a pattern which is standard in many other science and technology centers and museums. He hopes to begin interviewing in July and August to try to fill the position. It was recognized that the positions that had been eliminated could be reinstated if the new approaches do not seem to work, or if additional funds are discovered.

With regard to the capital fund, Oliver noted that the current year's budgeted figure of $400,000 has been revised down to $220,000 with only $60,000 of this having been received. There was a discussion as to whether the problem was lack of a sufficient development strategy, or a lack of Board involvement. There was general feeling that the Museum needed to compare the projected achievements for 1990 with the existing situation to determine the reasons for the shortfall, and to try to avoid having it repeated. Oliver at any rate felt that he was tied to the figure of $250,000 for the capital fund for 1991 unless there was a general commitment to a capital campaign next year.

2. Board of Directors Nominations. Gwen Bell joined the meeting after which a list of potential directors were considered. It was understood that the Committee was looking for six "workers" and four "names" to add to the Board. Those selected were Mel Bergstein (or Bill Hoover), Owen Brown, a nominee from Digital, Robert Henderson (or Charles Waite), Bob Higgins, Chuck House, Fritz Landman, Ed Belove, Roland Pampel, either Mimi Macksoud, Pat Grey, or Kaplan from Price Waterhouse, Dick Ruopp, Michael Simmons, and James Sutter. The narrowed list will be sent to Irwin Sitkin and Naomi Seligman for their comments before the persons on the list are contacted; but contacts should be made quickly by the various persons on the Executive Committee who had expressed willingness to speak to certain of the nominees.

3. Capital Campaign Planning. Gardner Hendrie reported that the group considering the capital campaign had met twice. He made reference to Gwen Bell's organizational chart presented at the last Executive Committee meeting and stated that the group felt it should try to get professional advice before proceeding. Oliver is to receive three or four proposals by May 9 for structuring and managing a capital campaign, with the goal of reporting to the Board of Directors at the annual meeting and beginning the campaign in the Fall.

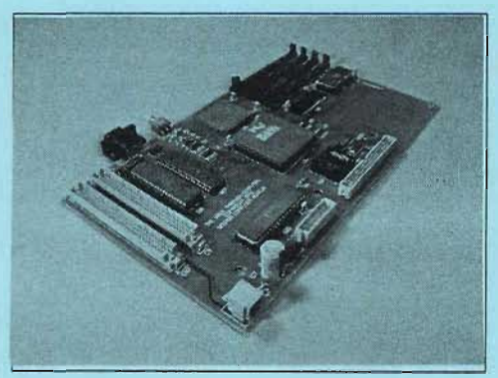
The next meetings of the Committee are set for May 30, June 14 (tentative), July 18, August 15, and September 19. The Board of Director's meeting is on June 22.

The Walk-Through Computer

A Landmark Exhibit at The Computer Museum, Boston, Massachusetts, USA

Insider's Report #6

The information in this newsletter is pre-release material. Please contact the Museum Development Office for further information.



Prototype logic board for The Walk-Through Computer. Photo by Richard Fowler.

Local Firms Complete Prototype "Motherboard"

A consortium of local technology companies has recently completed work on a protype circuit board for The Walk-Through Computer, the new permanent exhibit scheduled to open at The Computer Museum on June 23rd. The board, which was designed around the Intel i486™ microprocessor, is being used by the exhibit fabricator, F.W. Dixon, as a basis for constructing The Walk-Through Computer's 1100-square-foot "motherboard" (main logic board).

Why Not Make It Real?

Just four months ago, the exhibit designers were struggling with the problem of how to make a circuit layout for the giant computer that would be electronically accurate while allowing enough space for visitors to move about freely.

At the suggestion of Advisory Group members Gordon Bell, Vice President for Engineering at Stardent Computer, and Dave Patterson, Professor of Computer Science at UC/Berkeley, it was decided to go through the process of designing and fabricating a real printed circuit board, which could be used as a model for the exhibit.

Project Management by DGA

Alan Symonds, Technical Director for the exhibit, assisted by electrical engineer Peter Miller, designed the circuitry for the board using, OrCAD STD II (from OrCAD Systems Corporation), and SoftPC (donated to the project by Insignia Solutions, Inc. of Sunnyvale, California). Donald Glass, President of DGA Associates in Wilmington, Massachusetts, lined up the necessary suppliers to get the prototype built, while Sharon Nichols, DGA's Director of Customer Support Services, guided Alan and Peter through the fabrication process.

Layout by Cadence

Once the schematic was complete, Michael Halter and Christine Lachiusa of Cadence, in Lowell, Massachusetts, worked with the exhibit designer, Richard Fowler, to design a board layout that would reconcile physical constraints, such as visitor flow, with the dimensions of the actual board components.

Multi-Core and Eltech

In early February, copies of the completed artwork went to Multi-Core, Inc., also based in Lowell, where Don Gingras, Director of Marketing, supervised the actual fabrication of the circuit boards.

The completed boards were sent to Eltech Electronics, Inc. of North Billerica, Massachusetts, where Peter Johnson, President of the company, set up a small production run, using a sequence of automated machines to "stuff" twelve identical boards with sockets, switches, capacitors, resistors, and other electrical components.

In late February, prototypes were sent to Drew Huffman at Paracomp, Inc. for use in developing animation sequences (see *Insider's Report No. 5*), Exhibit Illustrator David Macaulay, and F.W. Dixon.

Worth the Effort

The use of a real, purpose-built PC board as a model is typical of the Museum's efforts to make the giant computer appear as real as possible.

"Basing The Walk-Through Computer on a real computer of our own design," says Alan Symonds, "turned out to be the only way to ensure we had a truly authentic exhibit. Although lots of people probably won't notice, if just one engineer looks down at the floor and says 'Hey, this thing could really work!' I think it'll be worth the effort."

The Computer Museum

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Computer Industry Hardware Donations

Equipment donations worth over $200,000 have now been received. In addition to a major cash grant announced previously (see *Insider's Report No. 2*), Digital Equipment Corporation has donated a MicroVax 3400 to the project. The computer's 256 parallel lines and 16 serial ports will be used to drive videodiscs, lighting, and other special-effects devices, using custom software developed at The Computer Museum. The system will run under VAXELN, Digital's real-time version of VMS. The donation was announced by Nancy Dube, Community Relations Manager for Digital.

Apple Macintosh IIfx

A Macintosh IIfx, donated by Apple Computer Corporationa, will be used to run The Walk-Through Computer's demonstration program, *World Traveler* (see *Insider's Report #4*). The computer is part of a package of eight Macintosh IIs the company has donated to the project. The remaining computers will be used for software development and as interactive "learning stations" when the exhibit opens.

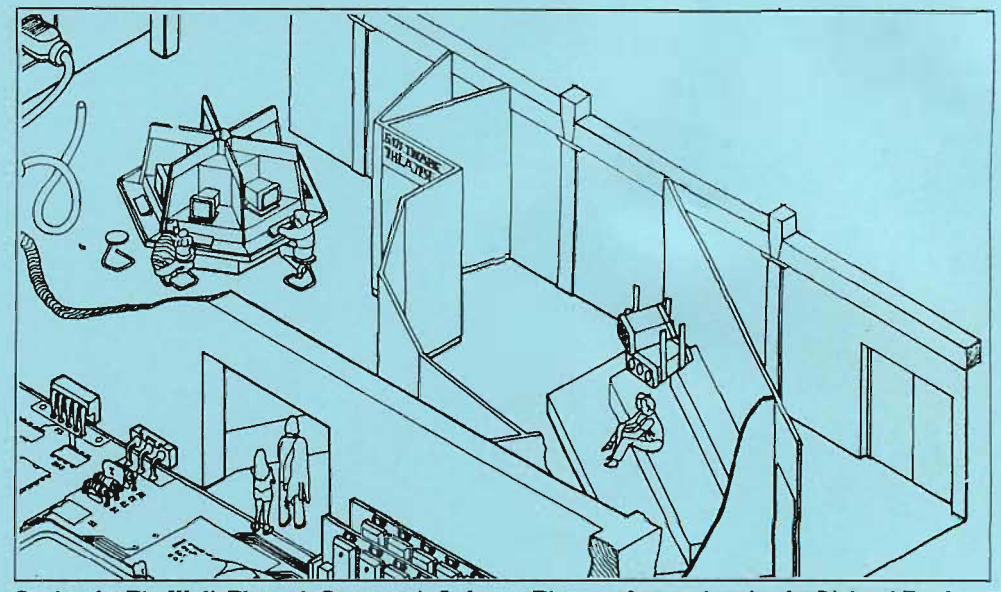
Mass Microsystems Disk Drive

Mass Microsystems of Sunnyvale, California, has donated a 45-megabyte DataPak removable hard drive, along with three cartridges. The drive's removable cartridges provide a useful means of sending large computer animation files back and forth between The Computer Museum and Paracomp, Inc. in San Francisco, where some of the animation segments are being developed. The donation was made possible by company president Adel M. El-Shimi and Meredith Lyon, Marketing Communications Manager.

Frame Grabber Boards

Data Translation, Inc., of Marlboro, Massachusetts, has donated one each of their QuickCapture and ColorCapture frame grabber boards, along with Image-Studio™ software. Fred Molinari, President of Data Translation and a longtime supporter of the Museum, arranged the donation.

Brad Pillow, of TrueVision, Inc., based in Indianapolis, has arranged for the long-term loan of a NuVista board together with a VIDI/O translation box and cables. The framegrabber boards are being used to digitize images for use in both the demonstration program and the motherboard "viewports."



Design for The Walk-Through Computer's Software Theater, from a drawing by Richard Fowler.

Post Perfect to Help Create Video

Dean Winkler, a computer artist based in New York City, will join forces with television producers John Palfreman and Nancy Linde of Boston's WGBH, to create a six-minute video for showing in The Walk-Through Computer's Software Theater.

Winkler, Vice President and Director of Creative Services at Post Perfect Inc., a $15 million electronic special effects facility in New York City, will create computer animation for the show. A longtime supporter of The Computer Museum, Winkler is an internationally known computer/video artist. His "Renaissance: Flying Around Boston," is on display in the Museum's computer graphics gallery.

Palfreman and Linde are the creators of "The Information Age," a six-hour television documentary on the history of the computer revolution, currently being produced by the WGBH Science Unit in association with the British Broadcasting Corporation. The two are now working closely with Museum staff to develop a script and storyboard for the Software Theater video.

The show will feature a computer-animated cartoon character, who will explain how computer software drives the hardware—how the very explicit instructions in a computer program constitute an algorithm for solving a particular problem and how these are executed by the CPU.

Insider's Grapevine

Here are some of the developments you'll be reading about in future *Insider's Reports*:

- Work has begun on a series of six interactive panels for The Walk-Through Computer. Located near the entrance to the exhibit, the panels will help visitors understand such basic concepts as the binary representation of numbers, text, and instructions. Formative evaluation with Museum interpreters and visitors will begin in early April.
- Press interest in The Walk-Through Computer is growing rapidly. *The New York Times*, *The Boston Globe*, *The London Daily Telegraph*, *Siemens Review*, and *Popular Mechanics* have all picked up the story. An estimated 10 million people will have read about The Walk-Through Computer by the time the exhibit opens on June 23rd.
- Noel Ward, the Museum's Director of Marketing, is preparing a marketing plan to ensure that The Walk-Through Computer gets the attention it deserves when it opens in June. The plan includes billboard, magazine, and newspaper advertising.

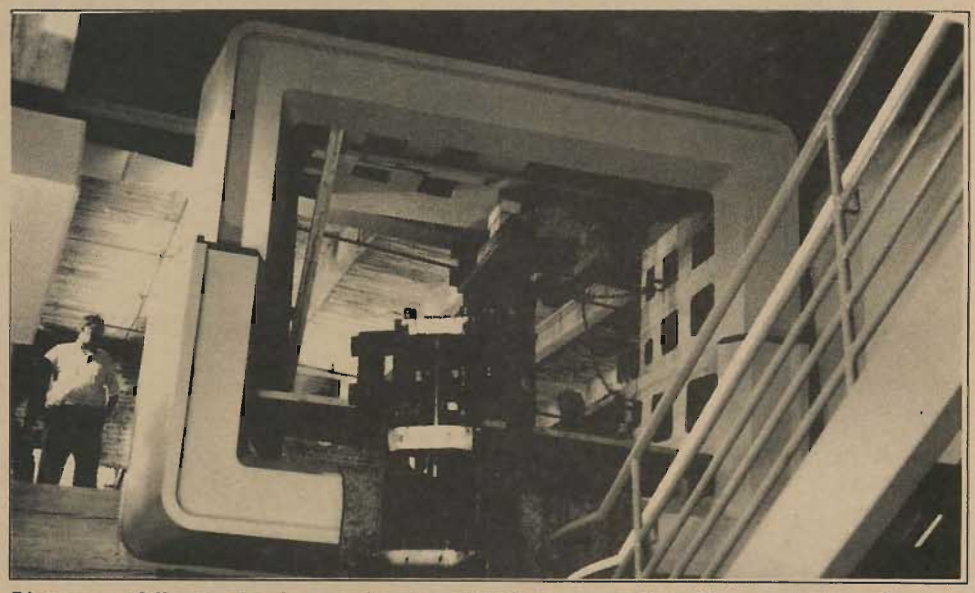
The Walk-Through Computer™

A Landmark Exhibit at The Computer Museum, Boston, Massachusetts, USA

Insider's Report #7

The information in this newsletter is pre-release material. Please contact the Museum Development Office for further information.

Walk -Through Computer™ Arrives



Riggers carefully ease the giant monitor into place in the new gallery. Photo by Richard Fowler.

Components of The Walk-Through Computer™, the world's only two-story model of a desktop computer, have now been moved to The Computer Museum from workshops at F.W. Dixon, the exhibit fabricator. It took a full day of work by a five-man rigging team to hoist the computer's giant monitor into place on the sixth floor of the Museum, overlooking the new Walk-Through Computer gallery. The giant keyboard, power supply, hard disk, and chassis front are also now on the exhibit floor, with the trackball soon to follow. A team of Dixon workers has set up shop in the gallery and is hard at work fabricating the remaining portions of the exhibit.

Originally, The Walk-Through Computer was to have been assembled in a warehouse in Wilmington, Massachusetts, then disassembled and brought to the Museum just a few weeks before the exhibit opening. The new plan saves precious time, and has the added advantage of giving visitors a sneak preview.

AT&T Donates $50K

AT&T recently pledged $10,000 toward construction of The Walk-Through Computer. Combined with a donation last year of $40,000, this brings AT&T's total sponsorship to $50,000, and makes the company an official exhibit Sponsor. "AT&T Computer Systems is proud to be a participant in The Walk-Through Computer," says Paul A. O'Brien, AT&T Data Area Manager-New England. "It's a wonderful resource for the Musem's mission of helping people understand these things called computers."

SuperMac Gives Hardware

SuperMac Technology, of Sunnyvale, California, has donated two Spectrum/8 Series III color monitors with 8-bit video boards and two DataFrame XP100 hard disks for use in Walk-Through Computer software development. The donation was arranged by company president Michael McConnell.

Other West Coast companies that have contributed to the development of the exhibit include Apple Computer Corporation, Macromind, Paracomp, Intel, Claris, Cirrus Logic, and Silicon Beach.

The Walk-Through Computer

The Computer Museum

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Media Interest Grows

According to Gail Jennes, The Computer Museum's Public Relations Manager, more than 16 million people will have read about The Walk-Through Computer before formal promotional efforts even begin.

International Highlights

News of The Walk-Through Computer has already spanned the globe with a half-page piece in the March 26 *London Daily Telegraph* and a *Jerusalem Post* feature on the Museum last December.

The *Telegraph* story prompted a stream of inquiries from the British media including the *London Times*, *New Computer Express*, *Electronic Times*, the BBC prime-time science program *Tomorrow's World* and the BBC's *Search Out Science* show for children. In addition, the West German *Siemens Review* (read by 40,000 of the world's opinion leaders) will publish a feature on The Walk-Through in its May/June issue. Germany's *Der Spiegel* is also interested in doing a piece.

National Highlights

Columnist Alex Beam broke the story in *The Boston Globe* last December. In March, *The Sunday New York Times* highlighted the new exhibit in a piece on the Museum that has been reprinted across the country and in Canada. The April issue of *Compute!* featured a photograph and description of The Walk-Through Computer as part of an extensive feature about the Museum.

Look for stories on April 16th in *Business Week*, April 18th in the *North Shore Weekly* chain distributed to 110,000 people in Massachusetts, and in the May issue of *Popular Mechanics*. On May 20th, *The New York Times Sunday Magazine* will feature The Walk-Through Computer as its "Works in Progress" piece. And in June, *Family Circle*, *The Boston Sunday Globe*, *Personal Computing*, and *CHILDSPLAY Magazine* are highlighting the exhibit with features or other coverage. Also coming up this summer is a story in *Results Magazine* (read by 25,000 top management executives in the US).

To top it off: *Good Morning America* is interested in greeting the country one morning in June from inside The Walk-Through Computer!

Workers from F.W. Dixon bring part of the giant keyboard into the Museum. Photo by R. Fowler.

Marketing The Walk-Through Computer™

Noel Ward, The Computer Museum's newly appointed Director of Marketing, is working with Commonwealth Creative Group of Natick, Massachusetts, to develop an advertising campaign designed to ensure that The Walk-Through Computer gets the audience it deserves when it opens on June 23rd.

High visibility advertising aimed at building public anticipation will begin three to five weeks before the opening. In the weeks following, advertising efforts will focus on maintaining awareness of The Walk-Through Computer and attracting visitors.

Media under consideration for the advertising campaign include: local and regional newspapers; billboards along major highways approaching Boston; transit cards on subway cars and buses; posters in train stations, airports, computer stores, tourism centers, public libraries, and community recreation centers.

"In the history of The Computer Museum," says Ward, "no other exhibit has had the potential to capture the imagination of as broad an audience as The Walk-Through Computer. A landmark exhibit, it presents us with a larger-than-life opportunity to promote the museum regionally, nationally and even worldwide." Ward feels The Walk-Through Computer has the potential to double the number of visitors to the Museum, currently running at about 100,000 annually.

Insider's Grapevine

Here are some of the developments you'll be reading about in future *Insider's Reports*.

- Intel Corporation has contributed $115,000 for use in the production of a video that will take viewers on a "walk" through The Walk-Through Computer.
- Testing and formative evaluation of the various Walk-Through Computer exhibit components is now underway. School children, visitors, and industry consultants are getting involved.
- Lotus Development Corporation has donated $25K towards construction of The Walk-Through Computer Software Theater.
- The Information Machine, the large introductory panel being created by David Macaulay, will incorporate six different interactive stations.