Back to the Future – The Way to a Personal Dynamic Medium for Creative Thought

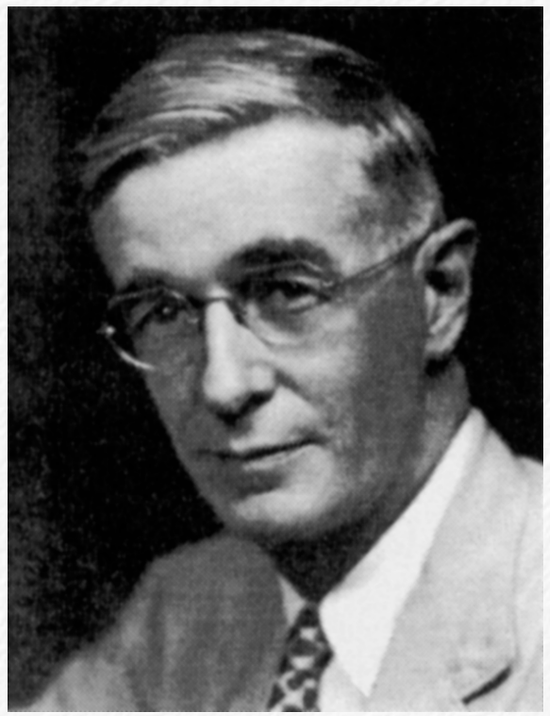
Matthias Müller-Prove

Why look back?

»I don’t know who discovered water
but I know it wasn’t a fish.«

Marshall McLuhan

Vannevar Bush (*1890 †1974)

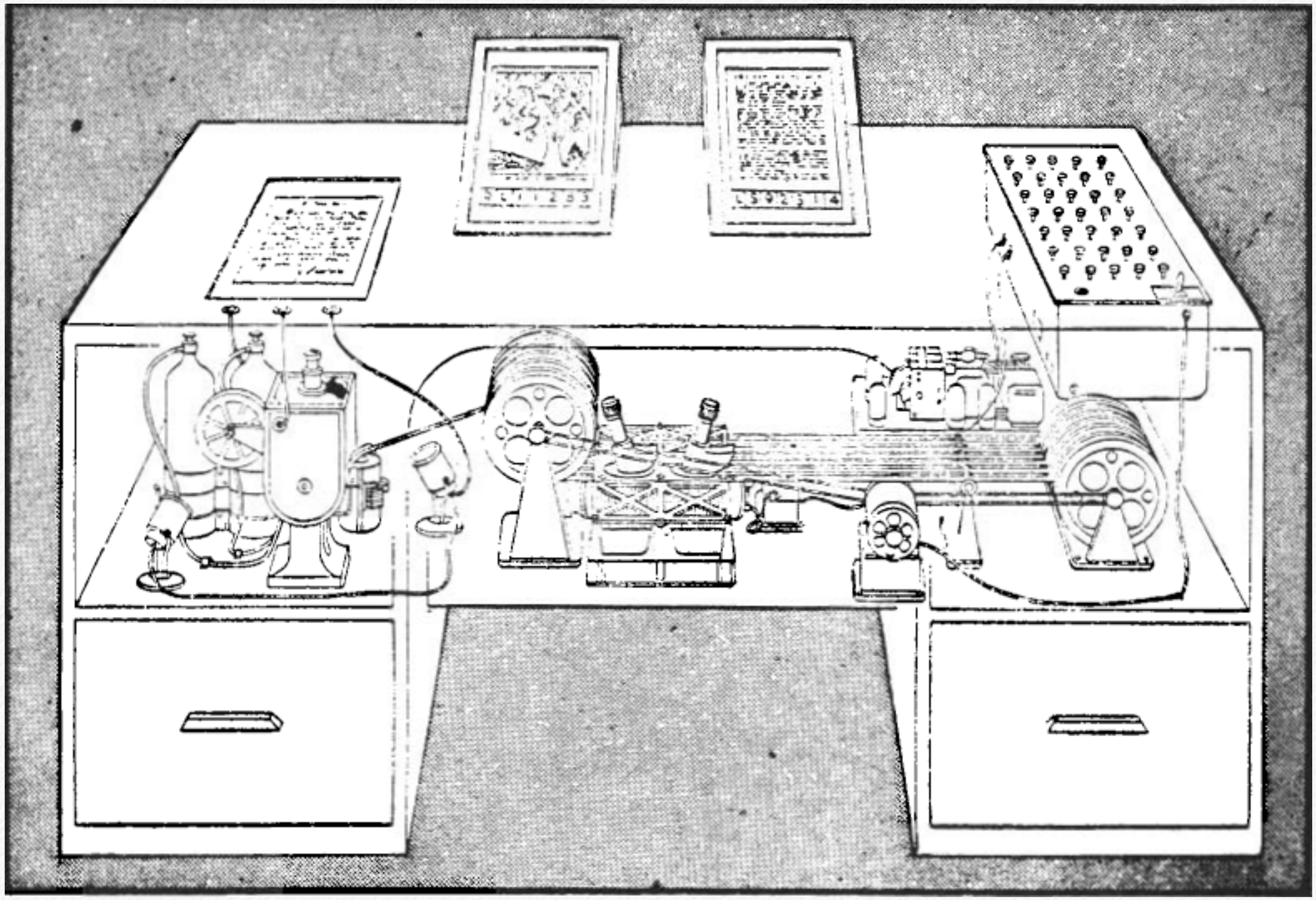


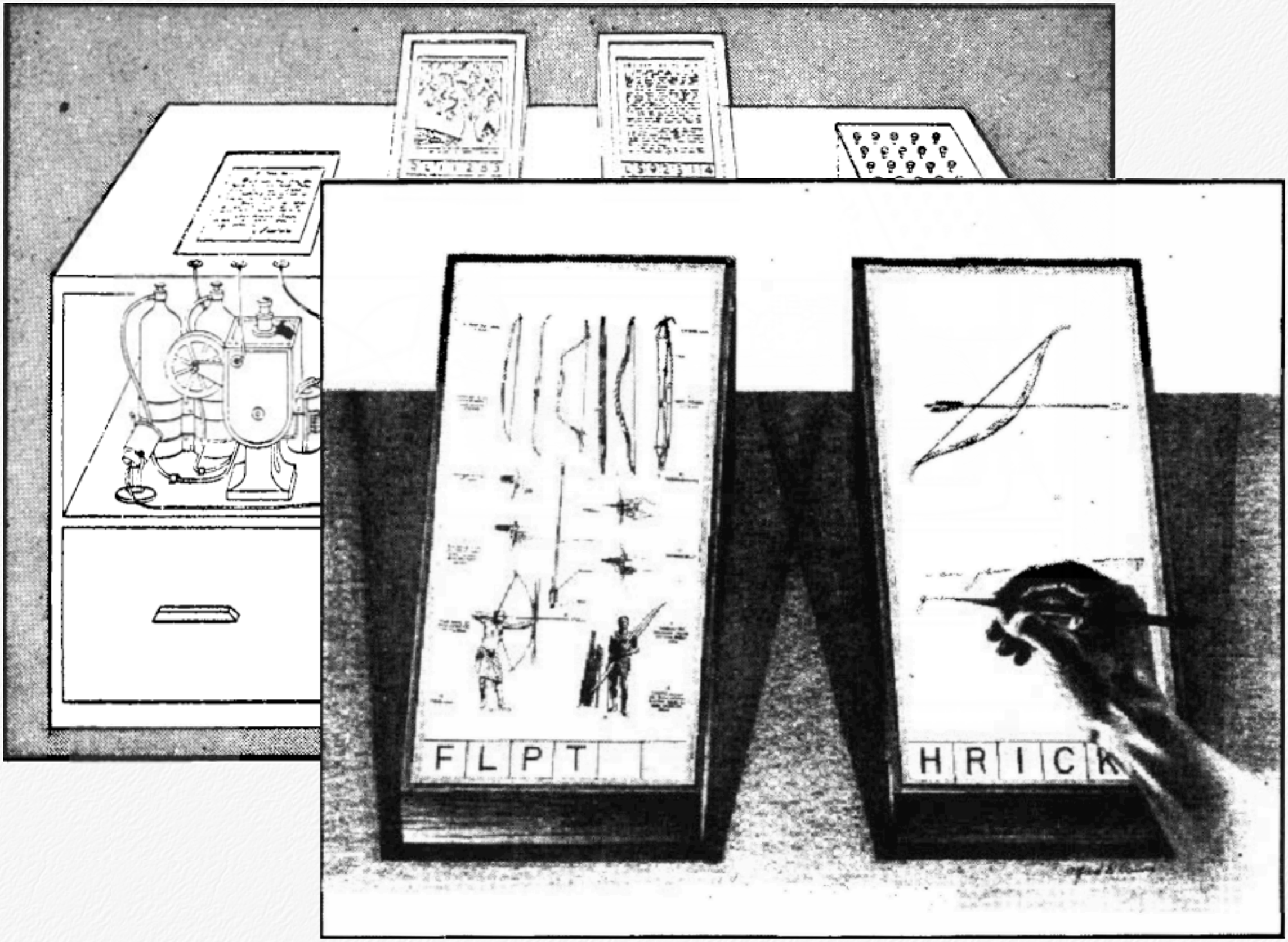
1945

As We May Think

»… publication has been extended far beyond our present ability to make real use of the record.«

Memex





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Sputnik Shock

1957

First artificial satellite launched by USSR

1958

Advanced Research Project Agency (ARPA) founded

Joseph R. Licklider (*1915 †1990)

1960

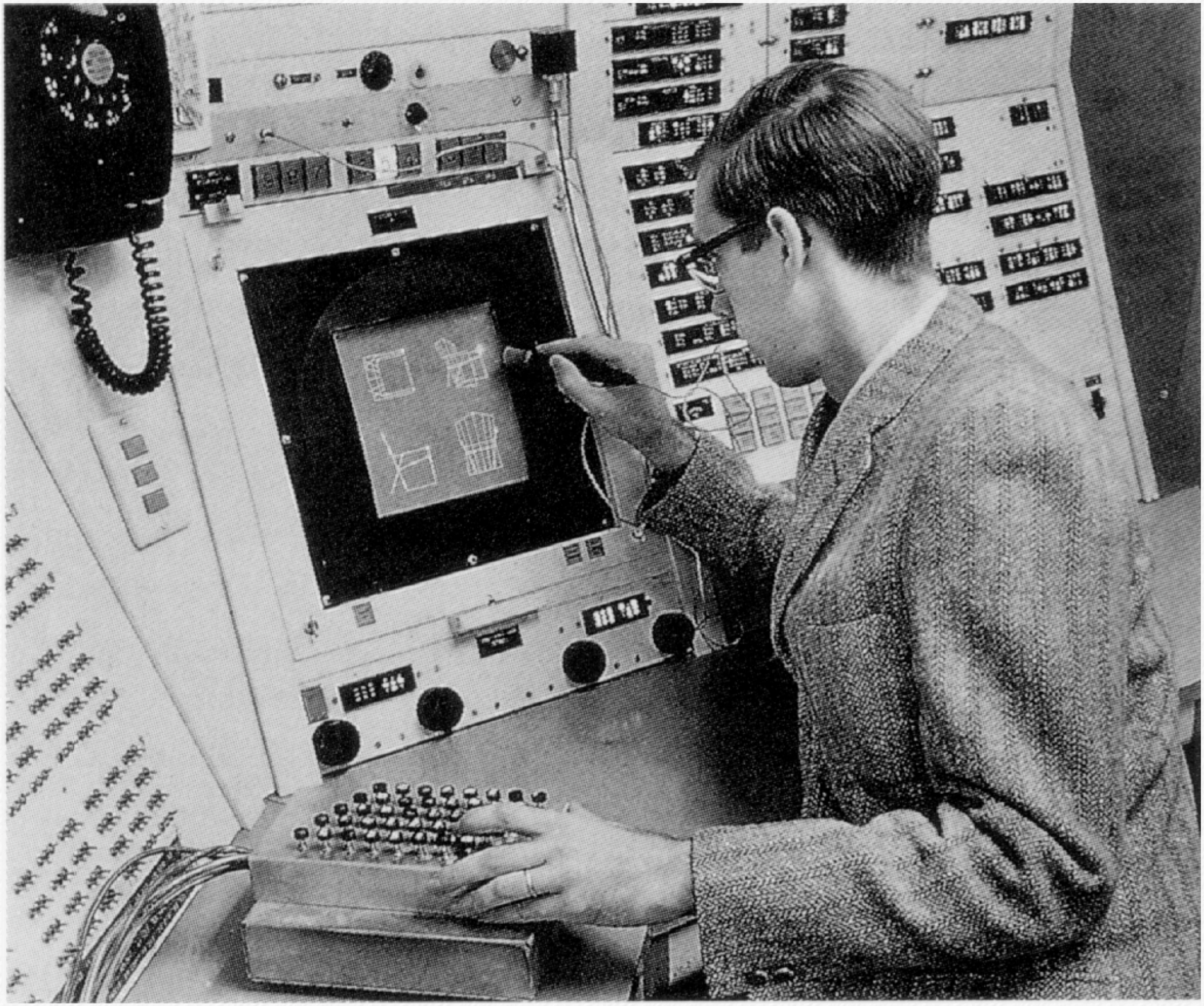
Man-Computer Symbiosis

»The hope is that … human brains and computing machines will be coupled together very tightly and that the resulting partnership will think as no human brain has ever thought and process data in a way not approached by the information-handling machines we know today.«

Ivan Sutherland (*1938)

1963

Sketchpad, a Man-Machine Graphical Communication System



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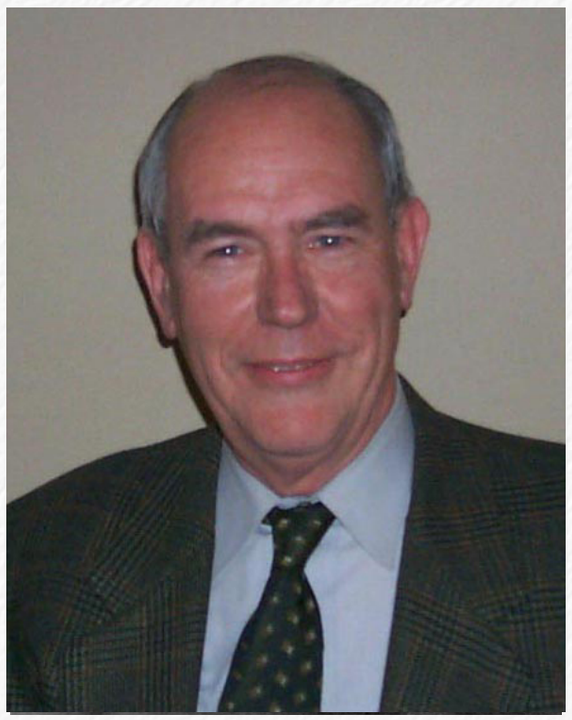
Ivan Sutherland (*1938)



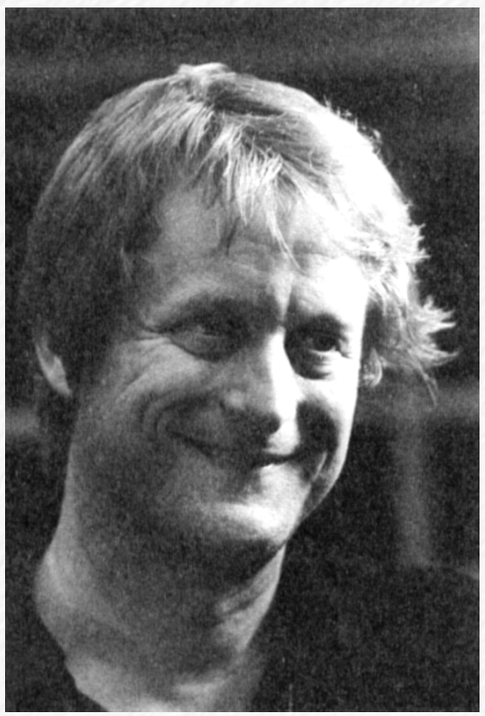
1963

Sketchpad, a Man-Machine Graphical Communication System

Today

Throughput Computing at Sun Microsystems

Theodor Holm Nelson (*1937)



1965

The Hypertext

1967

Hypertext Editing System (HES) by Ted Nelson and Andries van Dam

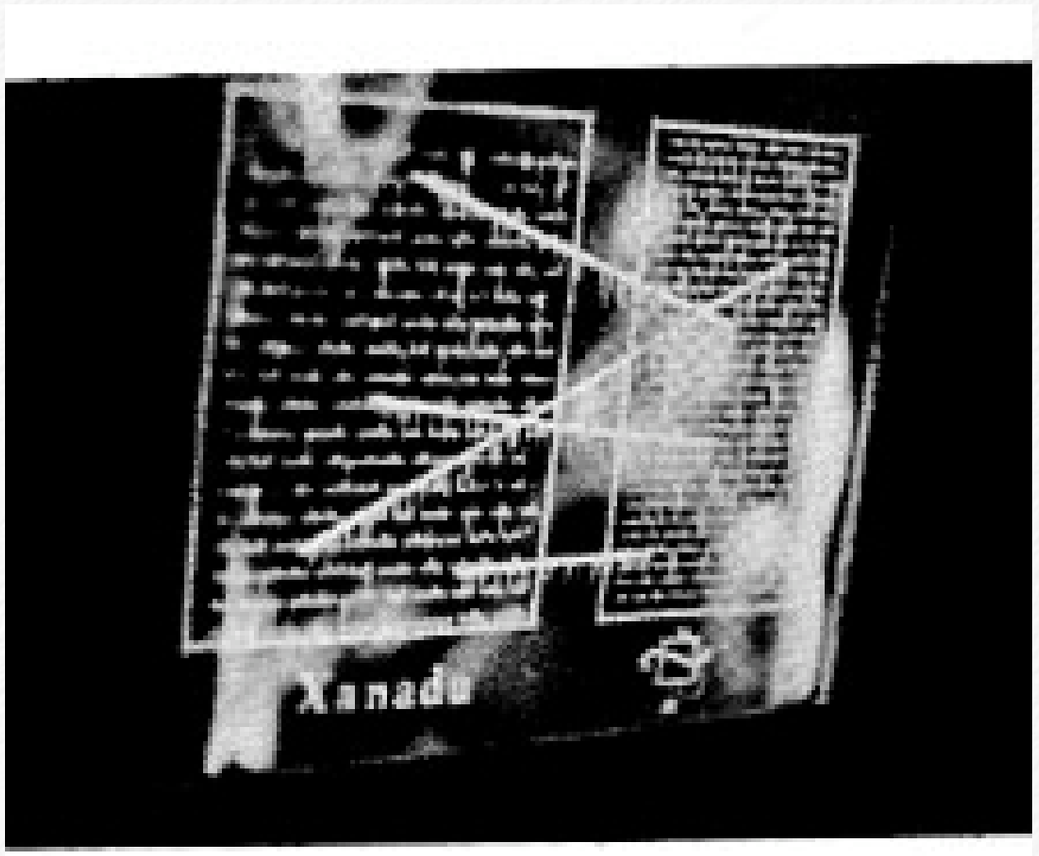
1972

ComputerLib/Dream Machines

Xanadu / Dream Machines

PARALLEL TEXTFACE (1971)

Real person sits at cardboard Xanadu mockup.



Independent text pulls dependent text along. Painted streaks simulate motion, not icicles.

Caerdroia 25 contents

File Edit Action Options Help

CAERDROIA 1992

Contents

375 343

Caerdroia 25 editorial

File Edit Action Options Help

Editorial - Caerdroia 1992

Welcome to this, the 25th edition of Caerdroia, which will show the range of material which can now be drawn together for each issue, covering a wide selection of information and ideas on the history and development of the labyrinth from its early origins until the modern day and beyond. Our thanks as always go to all those that have contributed to this edition - to the stalwarts and newcomers alike - and we extend our usual invitation to all of you to submit material for future issues.

4

The State of the Art of the Maze

File Edit Action Options Help

The State of the Art of the Maze

Adrian Fisher

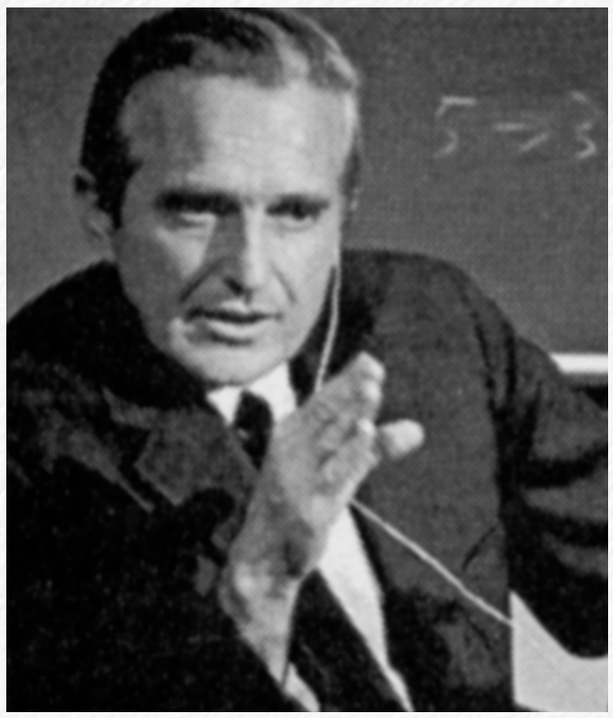
For 14 years, Minotaur Designs has specialised in creating highly innovative and uniquely designed mazes. By the end of 1992, we had designed over 60 mazes worldwide, as far afield as the Netherlands, Florida, Texas, California, Hawaii, South Korea and Argentina, as well as throughout the British Isles.

The past year has been as eventful as ever. Our maze design team based in St.Alban's, England, has been strengthened by the addition of Mary Goodwin, a qualified architect. Also, our

The State of the Art of the Maze 0

Start | MOWorks | MICROC... | Filter Man... | Teds ren... | Caerdroia... | Caerdroia... | The St... | IanPlain.... | Removab... | 2:06 PM

Douglas Engelbart (*1925)



1962

Augmenting Human Intellect: A Conceptual Framework

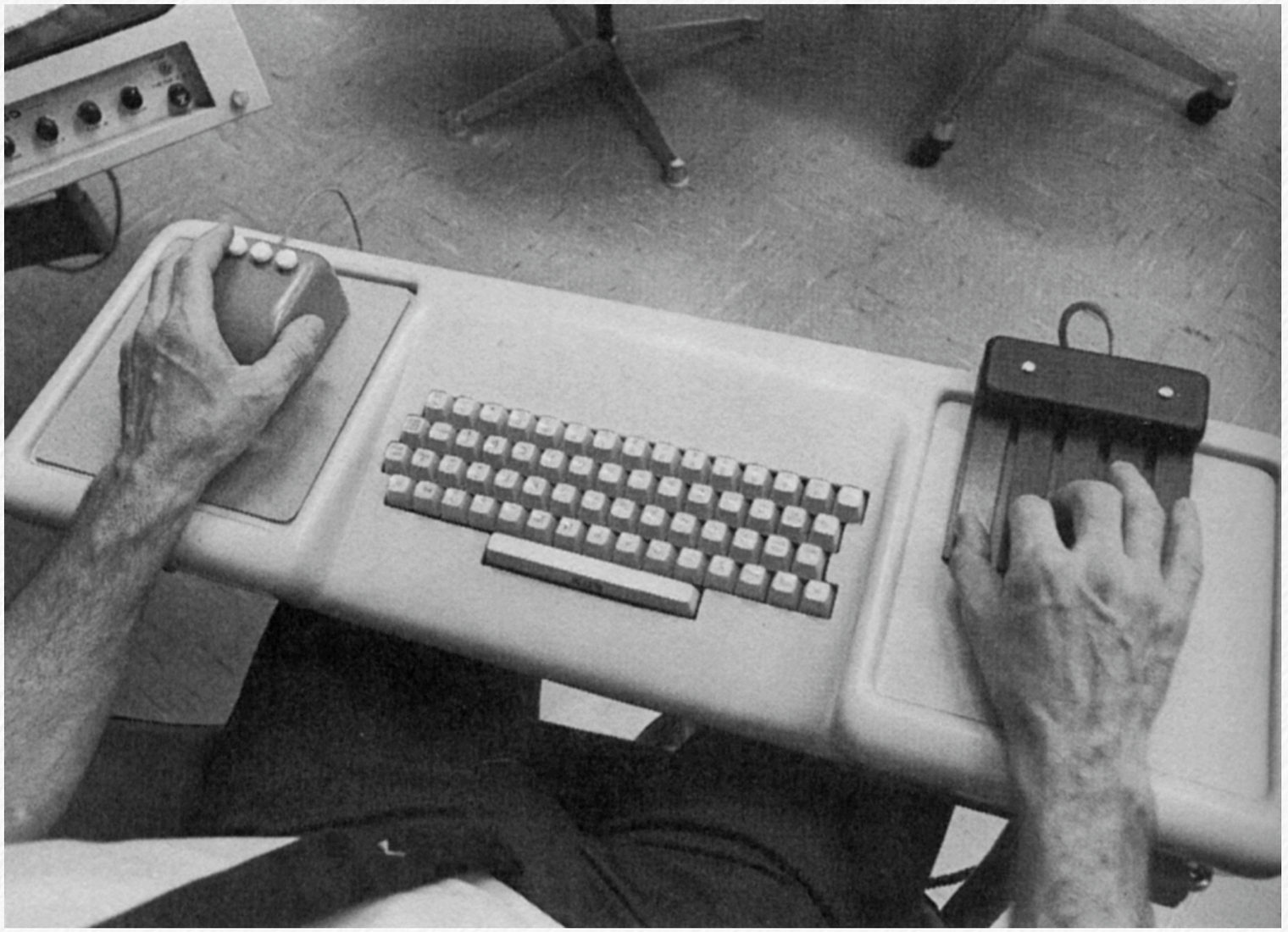
Stanford Research Institute - Augmentation Research Center (SRI-ARC)

Augment/NLS

Stanford Research Center /ARC

Stanford Research Center /ARC

Stanford Research Center /ARC



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Stanford Research Center /ARC

Stanford Research Center /ARC

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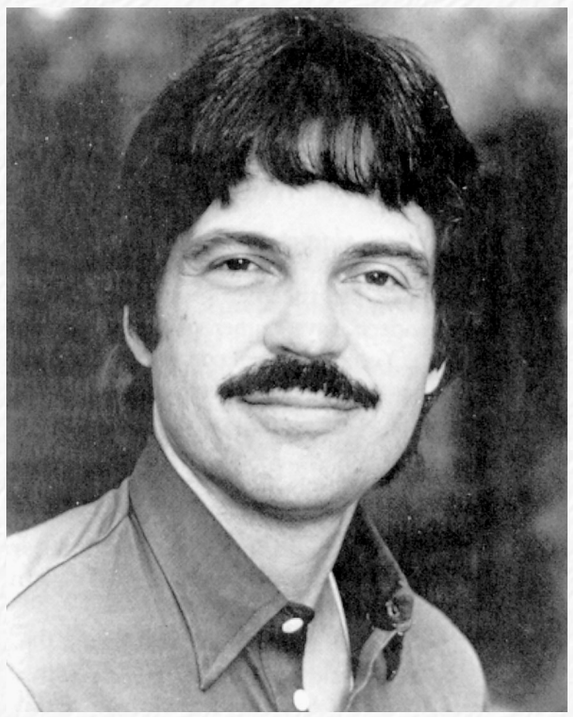
1968: “The Mother of all Demos”

How long did it take to *reboot* NLS?

Johns F. (Jeff) Rulifson

Alan Kay (*1940)



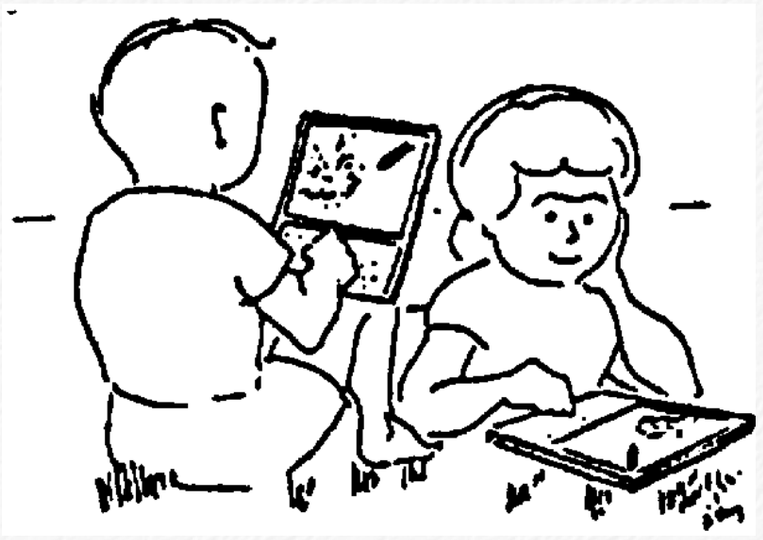
1972

A Personal Computer for Children of All Ages

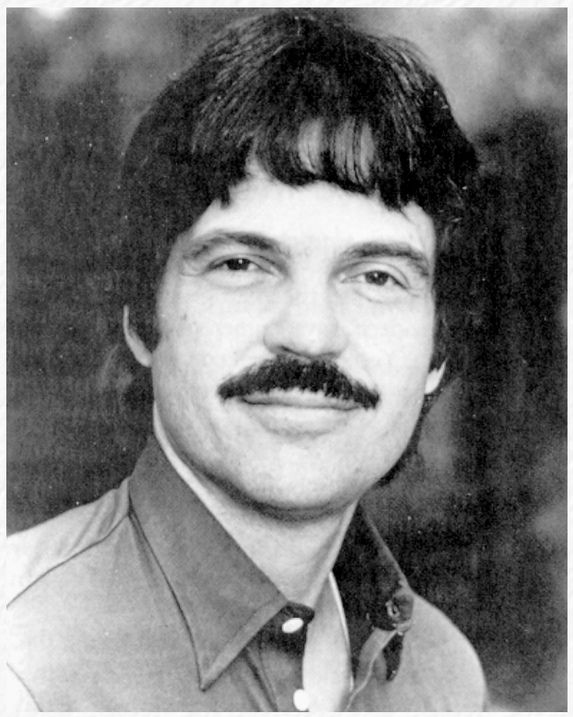
Learning Reasearch Group at Xerox PARC

Dynabook

Smalltalk



Alan Kay (*1940)



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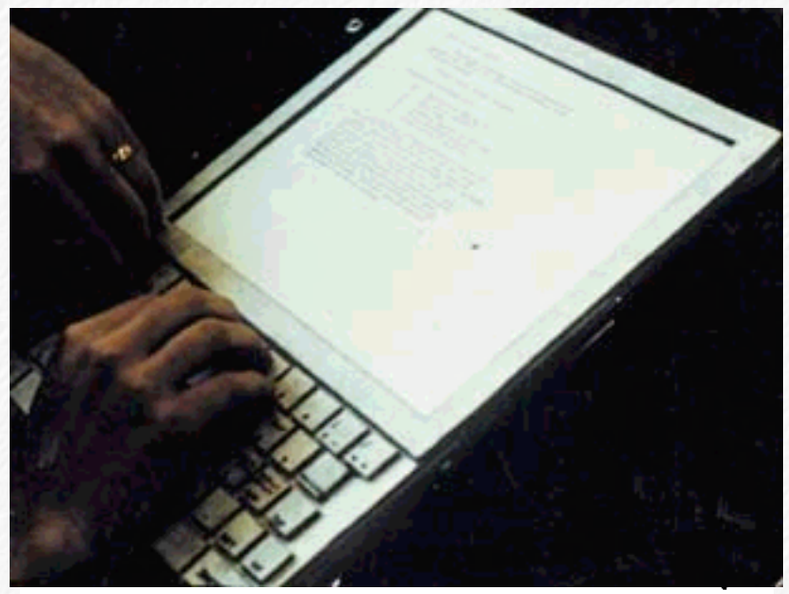
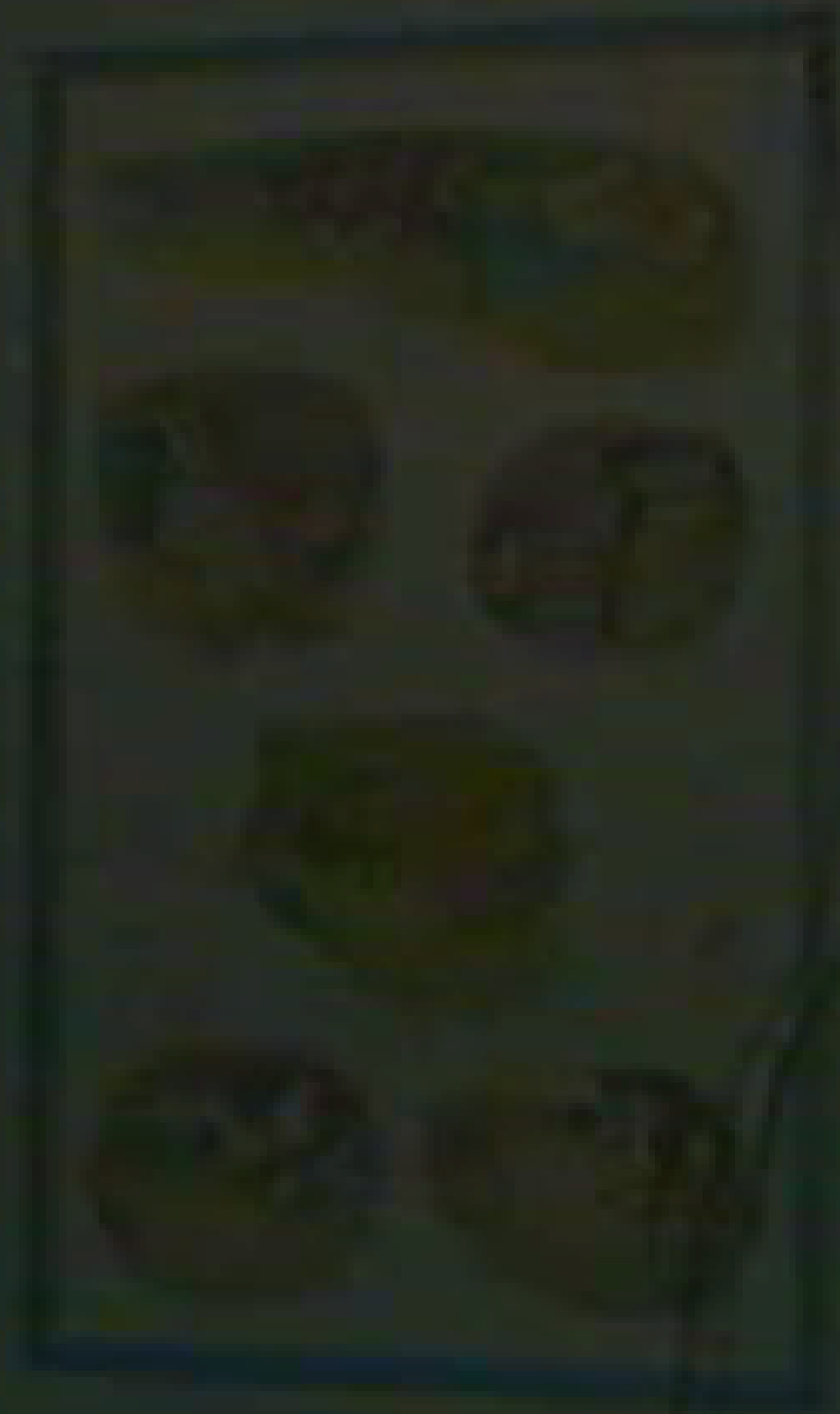
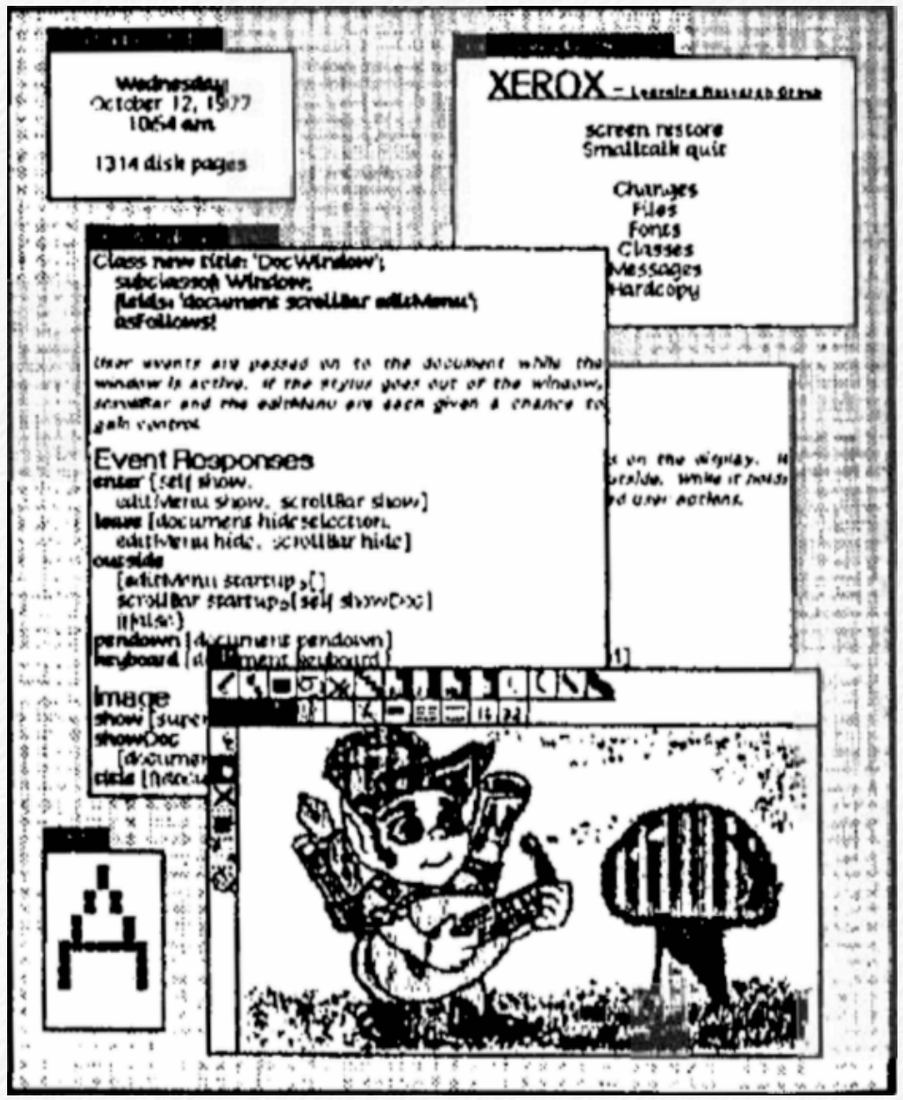
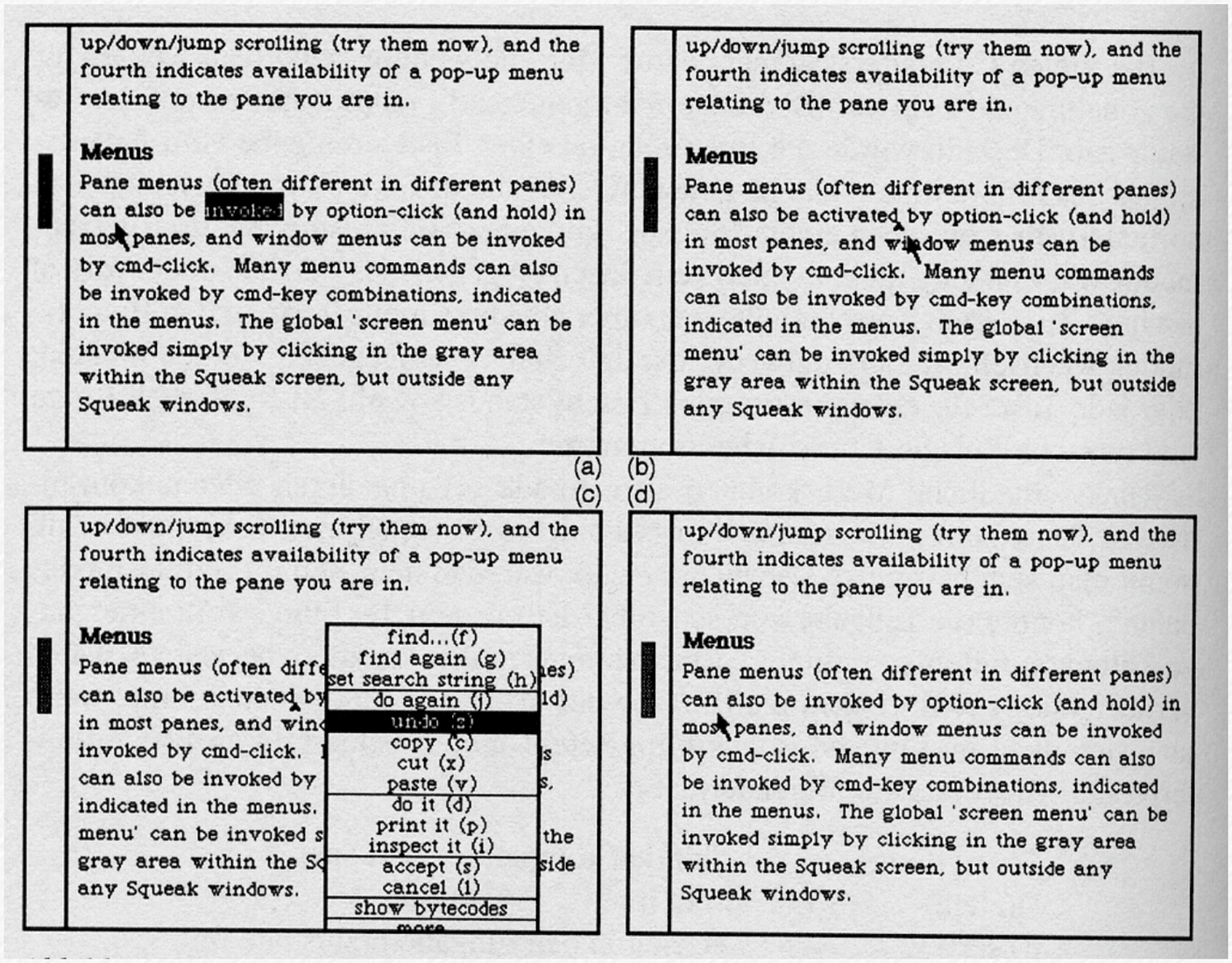




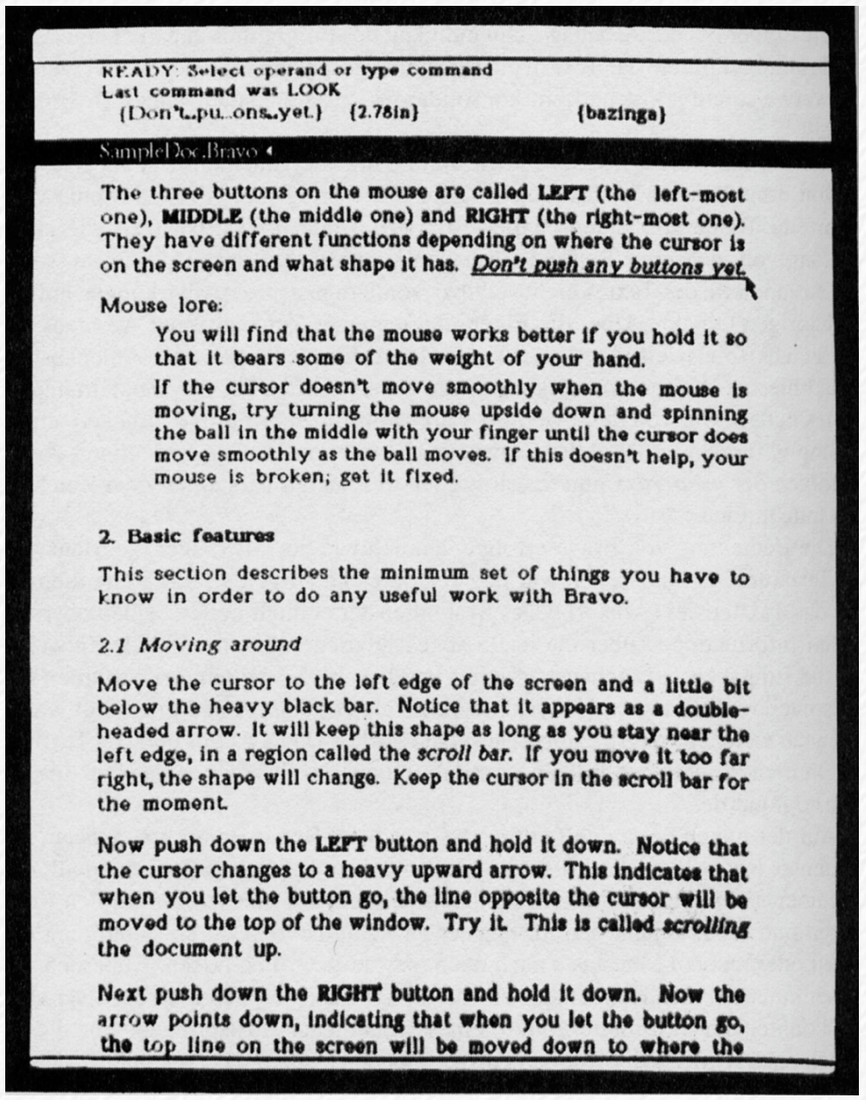
Xerox PARC


Wednesday
October 12, 1977
10:54 am
1314 disk pages
XEROX
screen restore
Smalltalk quit
Changes
Files
Fonts
Classes
Messages
Hardcopy
Event Responses
Image

Xerox PARC



Xerox PARC


READY: Select operand or type command
Last command was LOOK
{Don't..pu..ons..yet.} {2.78in} {bazinga}

SampleDoc.Bravo

The three buttons on the mouse are called **LEFT** (the left-most one), **MIDDLE** (the middle one) and **RIGHT** (the right-most one). They have different functions depending on where the cursor is on the screen and what shape it has. *Don't push any buttons yet.*

Mouse lore:

You will find that the mouse works better if you hold it so that it bears some of the weight of your hand.

If the cursor doesn't move smoothly when the mouse is moving, try turning the mouse upside down and spinning the ball in the middle with your finger until the cursor does move smoothly as the ball moves. If this doesn't help, your mouse is broken; get it fixed.

2. Basic features

This section describes the minimum set of things you have to know in order to do any useful work with Bravo.

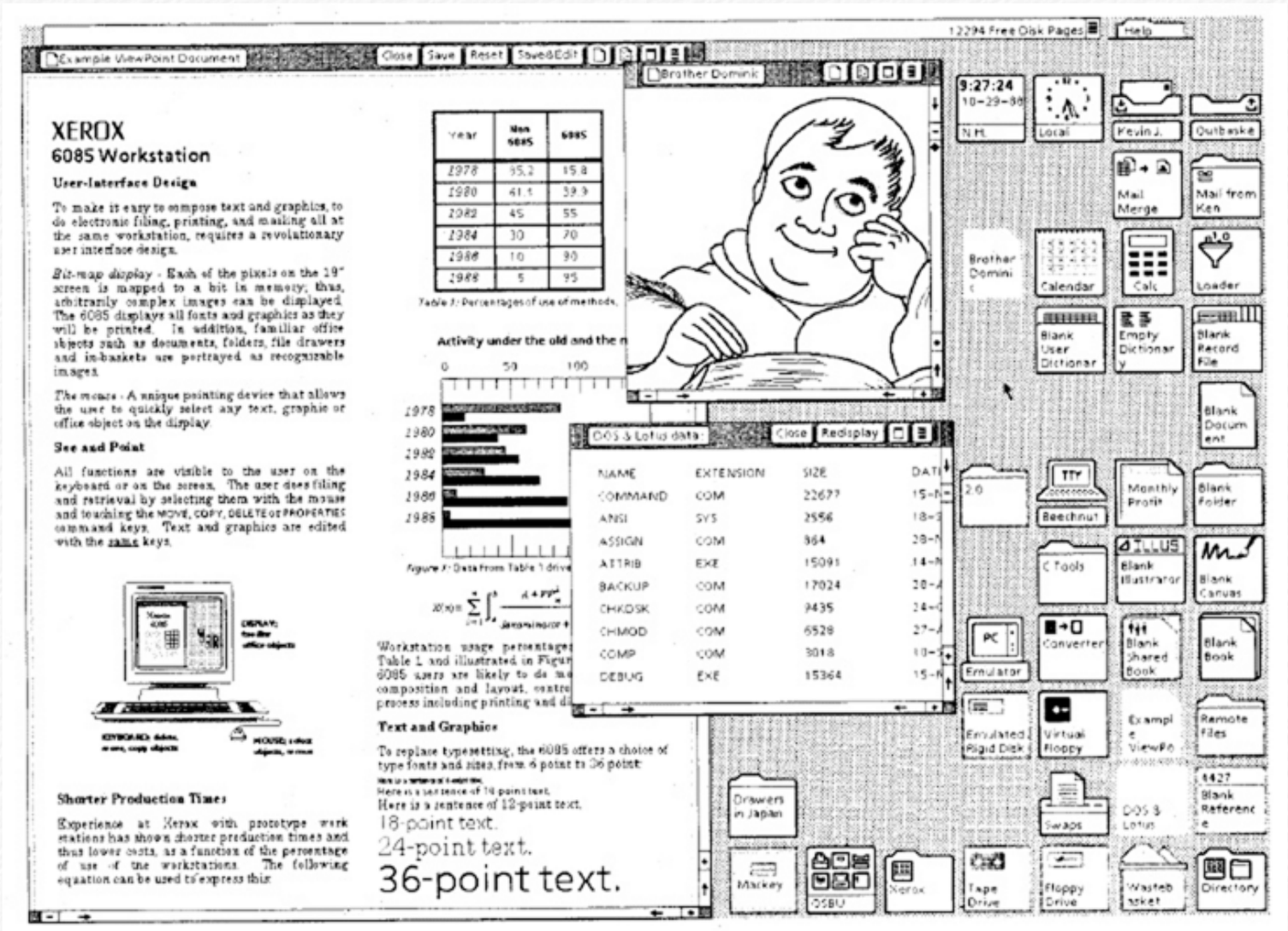
2.1 Moving around

Move the cursor to the left edge of the screen and a little bit below the heavy black bar. Notice that it appears as a double-headed arrow. It will keep this shape as long as you stay near the left edge, in a region called the *scroll bar*. If you move it too far right, the shape will change. Keep the cursor in the scroll bar for the moment.

Now push down the **LEFT** button and hold it down. Notice that the cursor changes to a heavy upward arrow. This indicates that when you let the button go, the line opposite the cursor will be moved to the top of the window. Try it. This is called *scrolling* the document up.

Next push down the **RIGHT** button and hold it down. Now the arrow points down, indicating that when you let the button go, the top line on the screen will be moved down to where the

Xerox PARC


Example ViewPoint Document
Close
Save
Reset
Save&Edit
12294 Free Disk Pages
Help
Brother Domink
XEROX
6085 Workstation
User-Interface Design
To make it easy to compose text and graphics, to do electronic filing, printing, and mailing all at the same workstation, requires a revolutionary user interface design.
Bit-map display - Each of the pixels on the 19" screen is mapped to a bit in memory; thus, arbitrarily complex images can be displayed. The 6085 displays all fonts and graphics as they will be printed. In addition, familiar office objects such as documents, folders, file drawers and in-baskets are portrayed as recognizable images.
The mouse - A unique pointing device that allows the user to quickly select any text, graphic or office object on the display.
See and Point
All functions are visible to the user on the keyboard or on the screen. The user does filing and retrieval by selecting them with the mouse and touching the MOVE, COPY, DELETE or PROPERTIES command keys. Text and graphics are edited with the same keys.
Shorter Production Times
Experience at Xerox with prototype work stations has shown shorter production times and thus lower costs, as a function of the percentage of use of the workstations. The following equation can be used to express this:
Year
Non 6085
6085
1978 95.2 15.8
1980 61.1 39.9
1982 45 55
1984 30 70
1986 10 90
1988 5 95
Table 1: Percentages of use of methods.
Activity under the old and the n
0
50
100
1978
1980
1982
1984
1986
1988
Figure X: Data from Table 1 drive
Workstation usage percentages
Table 1 and illustrated in Figur
6085 users are likely to do mo
composition and layout, contro
process including printing and di
Text and Graphics
To replace typesetting, the 6085 offers a choice of type fonts and sizes, from 6 point to 36 point:
Here is a sentence of 12-point text.
18-point text.
24-point text.
36-point text.
DOS & Lotus data
Close
Redisplay
NAME EXTENSION SIZE DAT
COMMAND COM 22677 15-N
ANSI SYS 2556 18-
ASSIGN COM 364 20-N
ATTRIB EXE 15091 14-N
BACKUP COM 17024 20-
CHKDSK COM 9435 24-
CHMOD COM 6529 27-
COMP COM 3018 10-
DEBUG EXE 15364 15-N
9:27:24
10-29-86
N M
Local
Kevin J.
Quirbeske
Mail Merge
Mail from Ken
Brother Domini
Calendar
Calc
Loader
Blank User Dictionar
Empty Dictionar y
Blank Record File
Blank Docum ent
2.0
TTY
Beechnut
Monthly Profit
Blank Folder
C Tools
ILLUS
Blank Illustrator
Blank Canvas
PC
Emulator
Converter
Blank Shared Book
Blank Book
Emulated Rigid Disk
Virtual Floppy
Exampl e ViewPo
Remote Files
Drawers in Japan
Swaps
DOS & Lotus
1427
Blank Referenc e
Mickey
OSBU
Xerox
Tape Drive
Floppy Drive
Wasteb asket
Directory

Xerox PARC


XEROX
Office Products Division
XEROX
Office Products Division

Nicholas Negroponte (*1938)

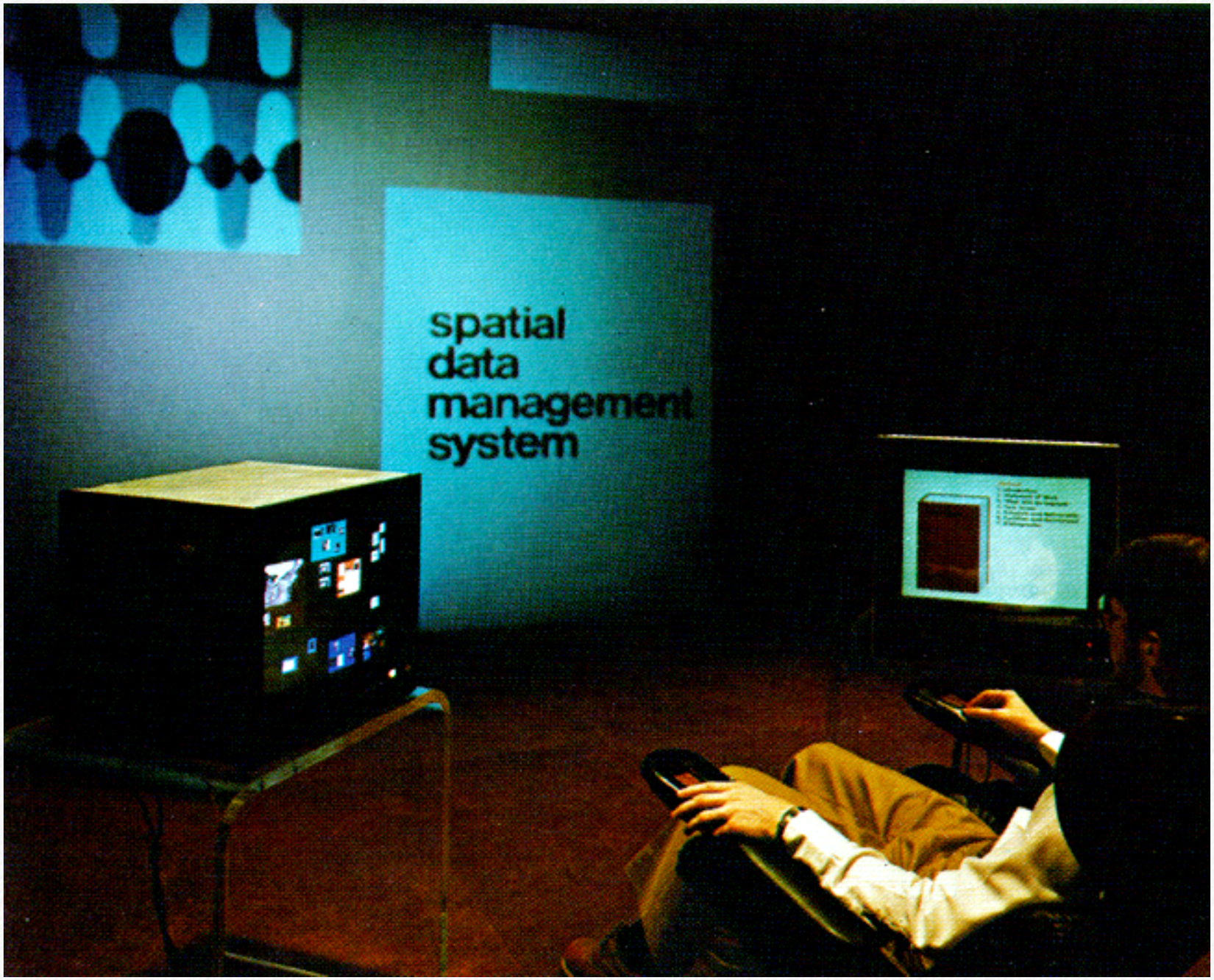
1970s

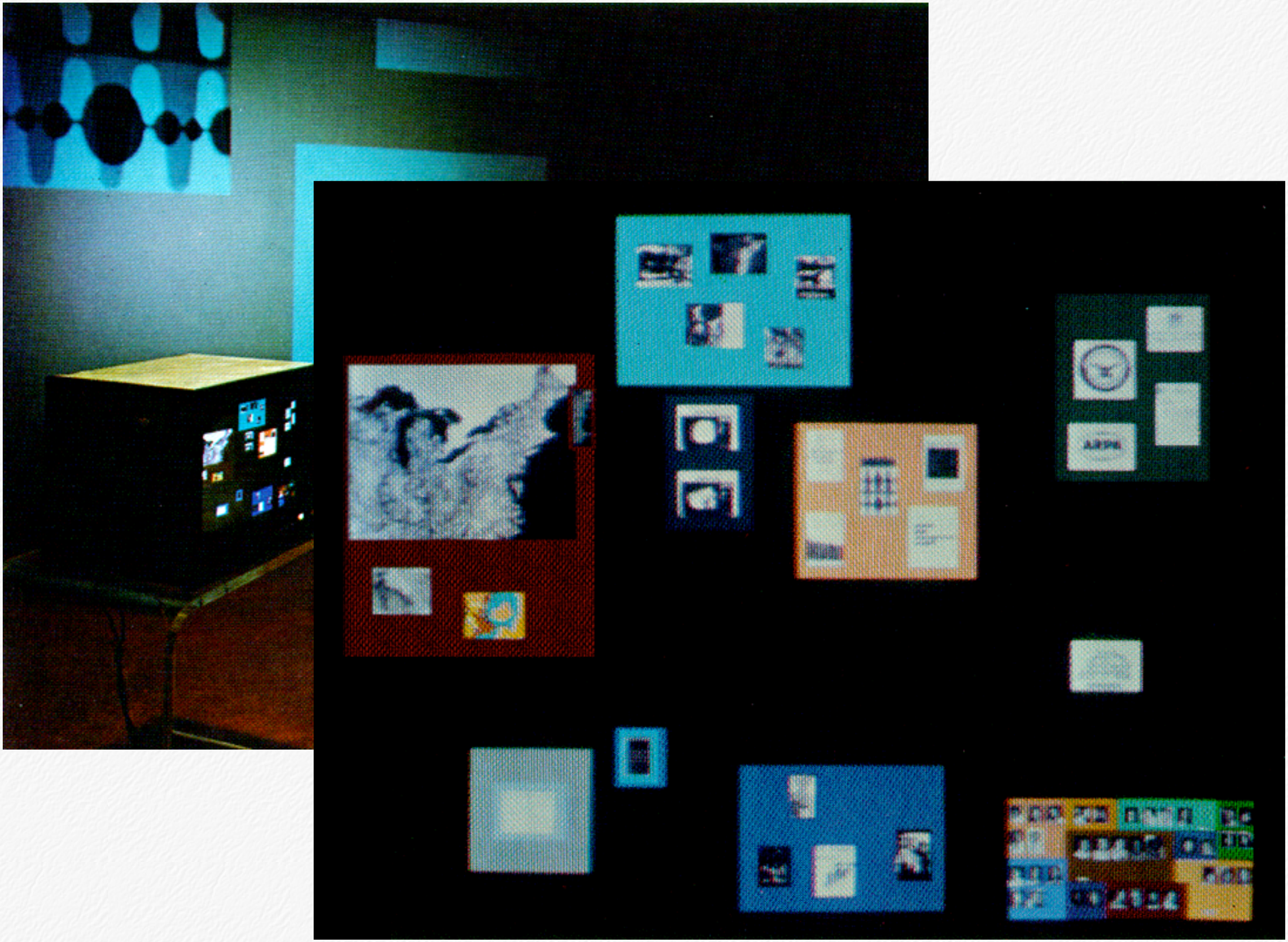
Architecture Machine Group at MIT

Spatial Data Management System / Dataland

1980

‘Put-That-There’: Voice and Gesture in the Graphics Interface by Richard Bolt


spatial
data
management
system



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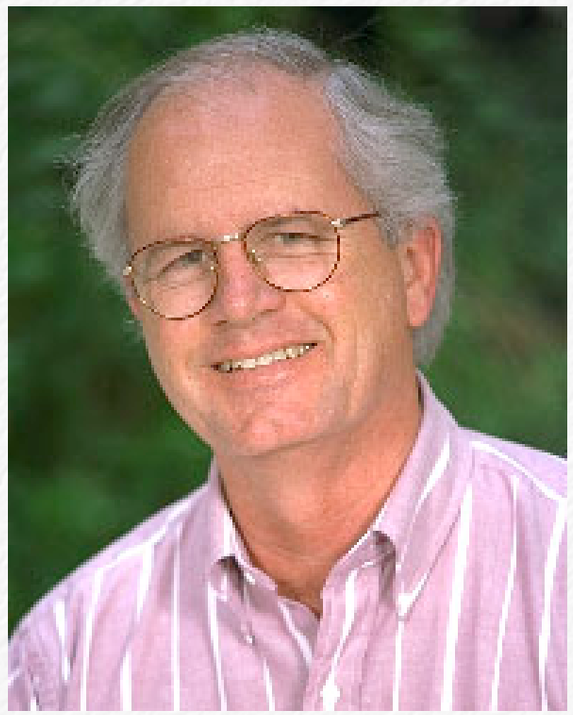
David Canfield Smith, F. Ludolph

1983

- Apple Lisa

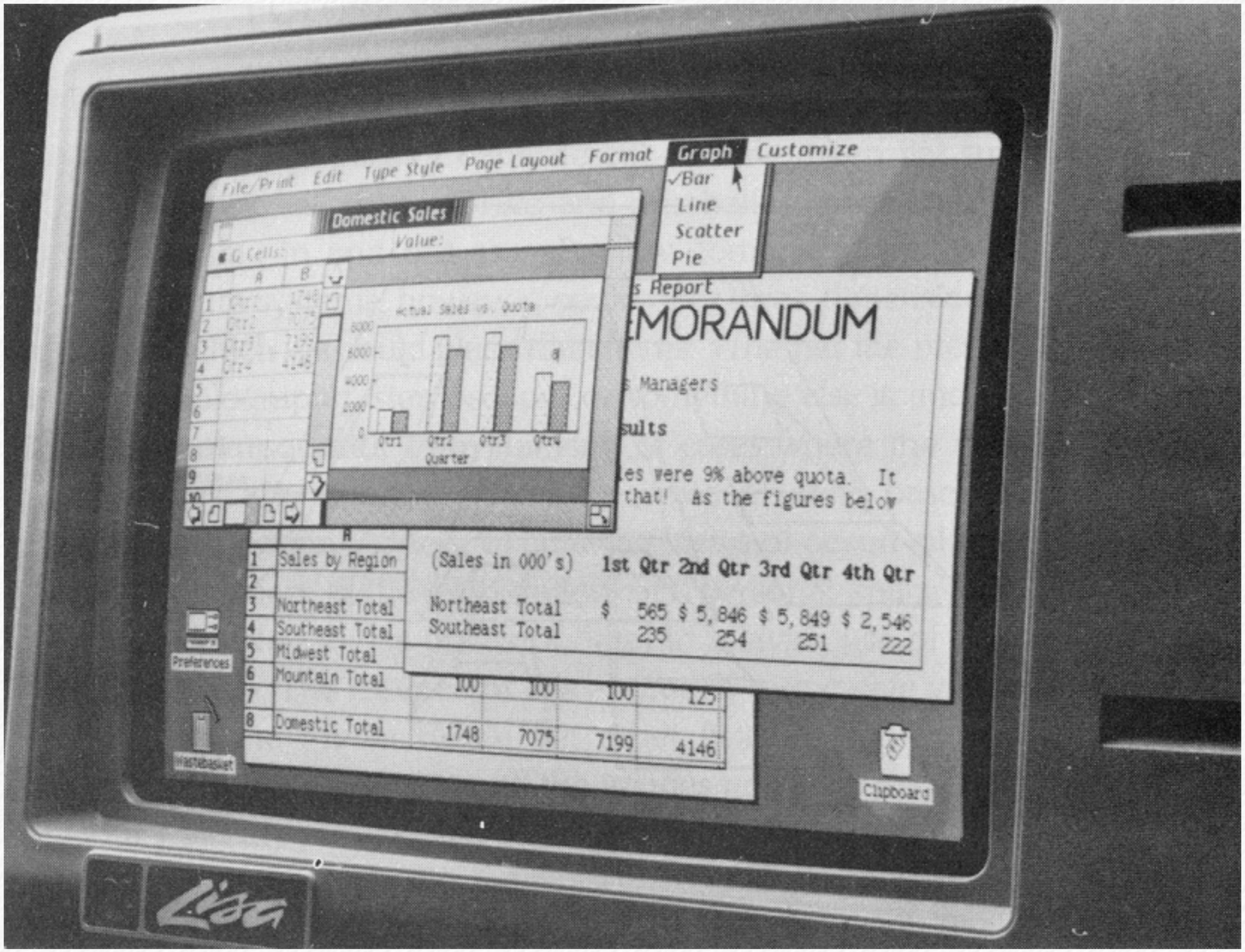
Today

- Project Looking Glass (3D Desktop) at Sun



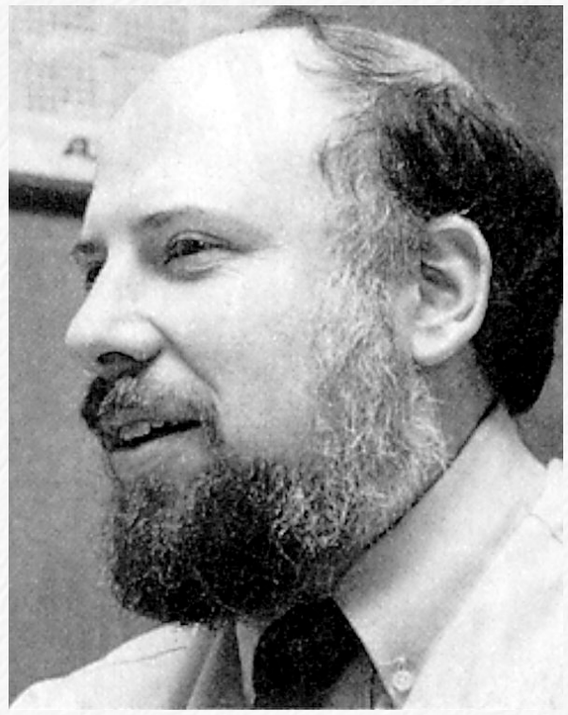
Frank Ludolph

Apple Lisa



mprove

Jef Raskin (*1943 †2005)



1979-1982

Lead of Apple Macintosh Project

2000

The Humane Interface – New Directions for Designing Interactive Systems

T. Berners-Lee (*1955) R. Cailliau (*1947)

1989

Information Management: A Proposal

World Wide Web

WorldWideWeb
Info
Navigate
Document
Find
Edit
Links
Style
Print... p
Page layout...
Windows
Services
Hide h
Quit q

Links
Mark all A
Mark selection M
Link to marked L
Link to New N
Unlink Z
Link to file...
Help

Tim's Home Page

My home page

altas

The World-Wide Web Virtual Library: Subject Catalogue

The WWW Virtual Library

This is a c
type ., an

Mail to ma
to add po
administra

See also

Aeronaut

Agricultu

Anthropology

Archaeology

Asian Studies

Astronomy and

Bio Sciences

Separate list.

Separate list .

High-Energy Physics Information

CERN Welcome

CERN

European Laboratory for Part

Geneva, Switzerlan

About the Laboratory:

- on CERN info ,
- General information, divisions, groups and activities , scientific committees

CERN Experiments

Experiments

WWW Support for Experiments

ALEPH	LEP experiment
ALICE	A Large Ion Collider Ex LHC
ATLAS	A Toroidal LHC Appar
CHORUS	WA95 - Neutrino oscill CERN
CMS	Compact Muon Solenc

Atlas

Summary and Conclusion

	Desktop	*Hypertext*	*Network*
1940s	Memex	Trails	
1960s	Sketchpad	“Hypertext”	
	Augment/NLS		ARPAnet
1970s	Personal Computing		Ethernet
1980s	Desktop Metaphor	Local Hypertext	Internet
1990s		World Wide Web	

What is missing today from a Personal Dynamic Medium for Creative Thought?

Lost Concepts

1) Document-centric User Interface

Application- and protocol-independency

A robust way to store, find and identify documents is needed.

2) Authoring Hypertext

Wikis and Blogs are just a (shallow) work-around.

Lost Concepts

3) Consistent User Interface

Desktop and Web pose different styles of interaction.

4) Persistency and Spatiality

Desktop and Browser should store positions of objects.

5) Gestures & Context

There is much more than keyboard and mouse.

Matthias Müller-Prove
www.mprove.de