

Revisiting Geddes' Outlook Tower

The Information Age, 100 years on.

Mike Amundsen
API Academy, CA Technologies
@mamund



SOAP is for Components



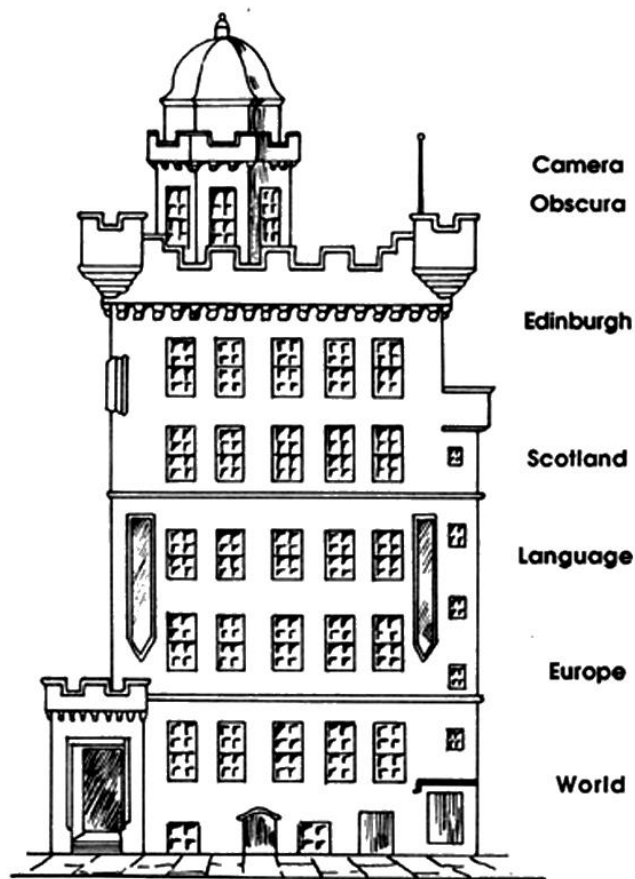
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1890s – 1940s

The first information age...



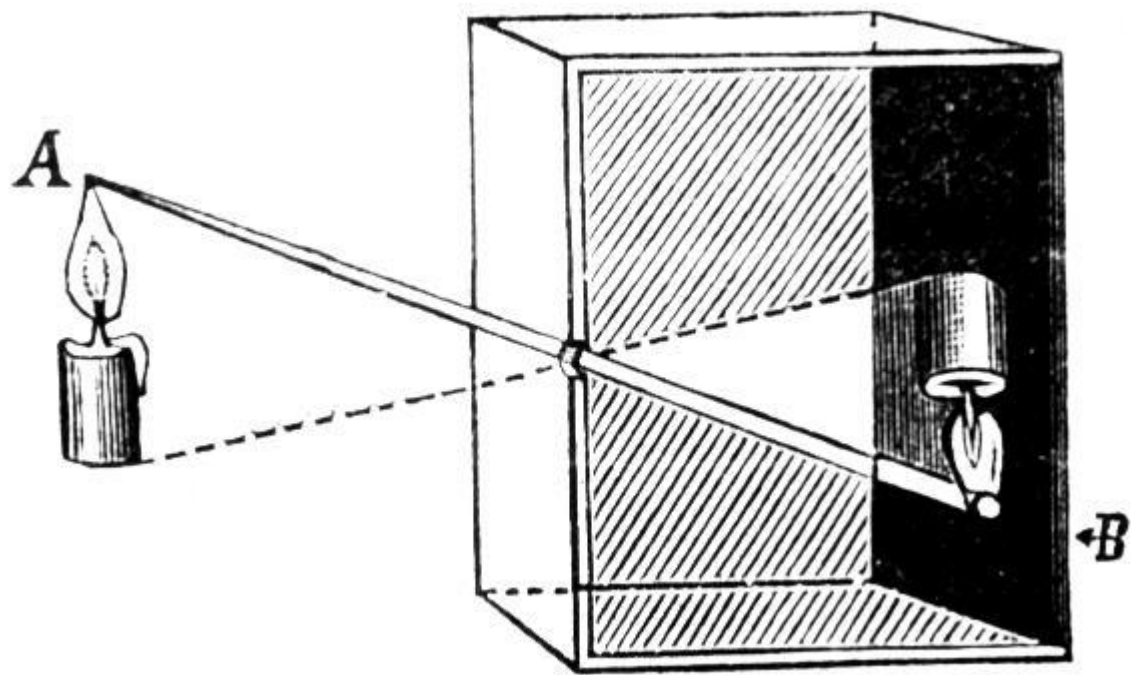




DIAGRAMMATIC ELEVATION OF THE OUTLOOK TOWER. EDINBURGH.

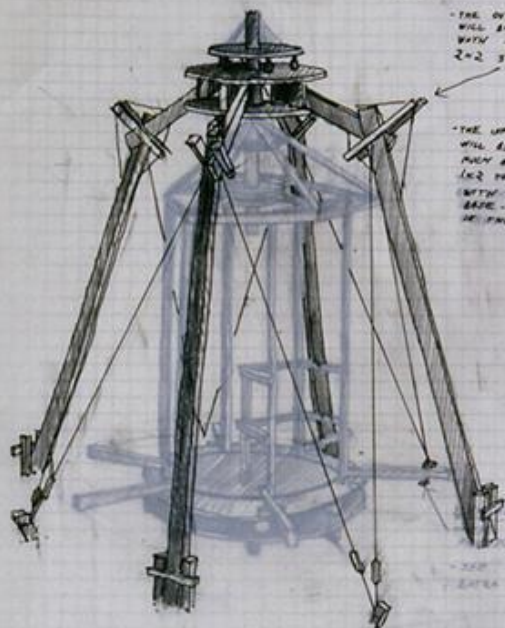
FROM PATRICK GEDDES Cities in Evolution
(LONDON: WILLIAMS AND NORGATE 1915).

Camera Obscura



PANORAMIC CAMERA OSCURAE

FRAMEWORK OF INNER
AND OUTER STRUCTURE



"THE OUTER FRAMEWORK
WILL BE CONTROLLED
WITH 2x2'S AND
2x2 STAYS"

"THE INNER FRAMEWORK
WILL BE MADE AS
LIGHT AS POSSIBLE WITH
1x2 TO REDUCE WEIGHT.
WITH A RIGID COLUMN
BASE - STRENGTHENING
OF THE ENDPOINTS."

"THE SHOT OF
EXTRA INFORMATION"



"THIS FRAMEWORK WILL
BE LOCATED IN THE
SAME PLANE AS THE
PANORAMIC TABLET."

"EXTENDED SUPPORTS
THAT ARE AVAILABLE
FOR THE TABLET."

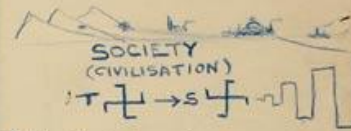
"THE SHOT OF
EXTRA INFORMATION"

Donald Lawrence, York Panoramic Camera Obscura 2, preliminary drawings, 1987.



British Association SECTIONS. A B C D & E

SOCIOLOGICAL
§E Geographical 12



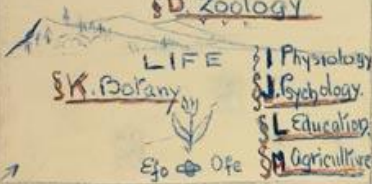
§H Anthropology.

§F Economics (Physical Values)
(EUGENICS)



BIOLOGICAL
§E Geography

§D Zoology



§I Physiology
§J Psychology
§L Education
§M Agriculture

§E Geography PHYSICAL
§G Engineering



§F Economics (Physical Values)



Section E MATHEMATICAL

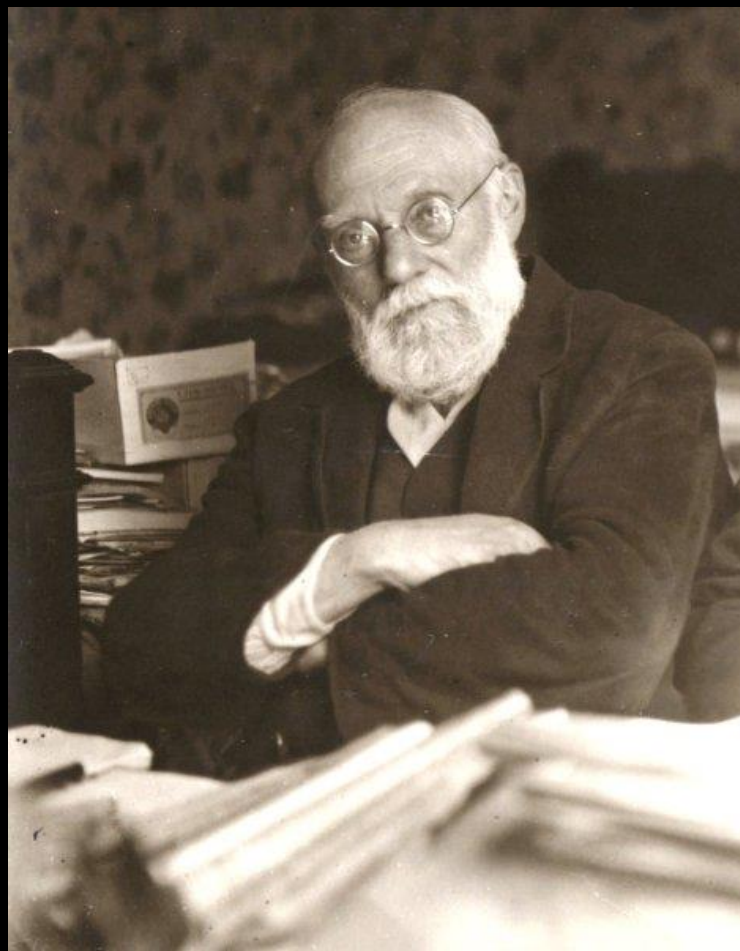
§A Mathematics & PHYSICAL SCIENCE

§F Economics & Statistics

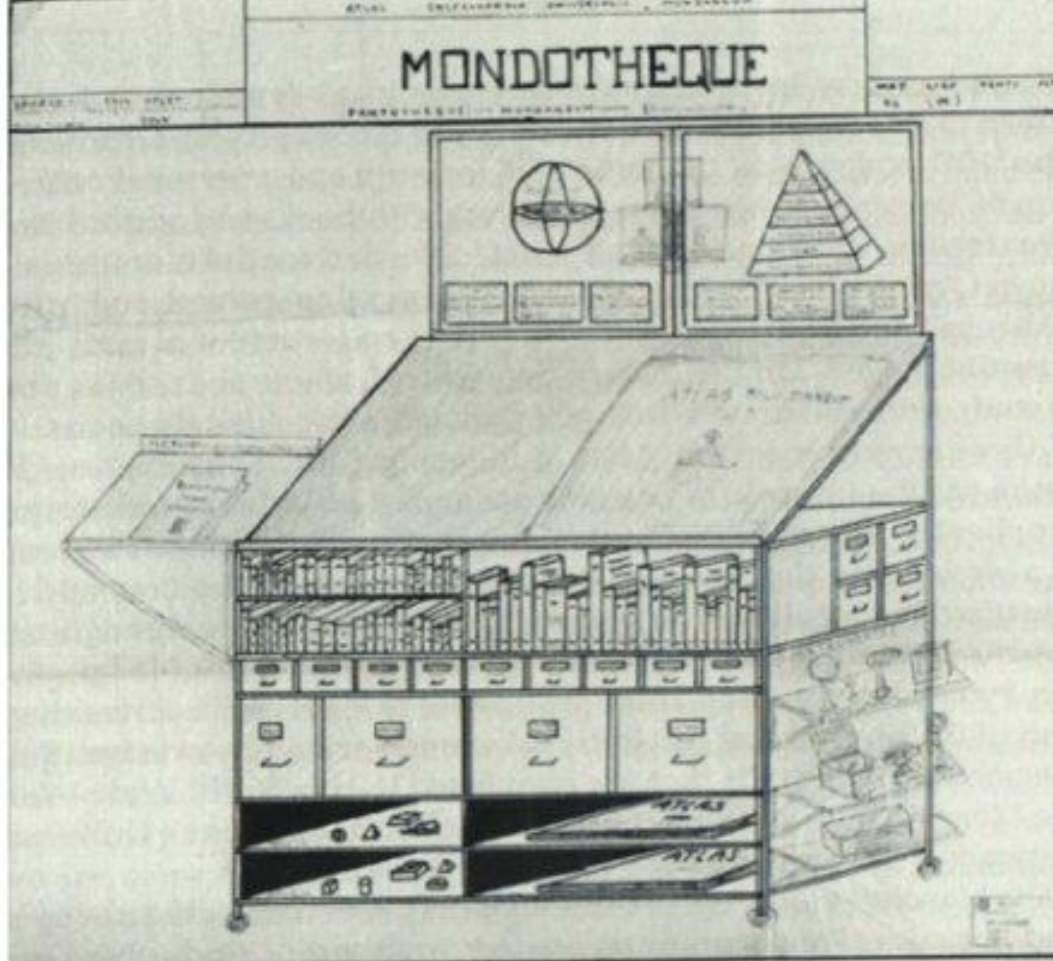




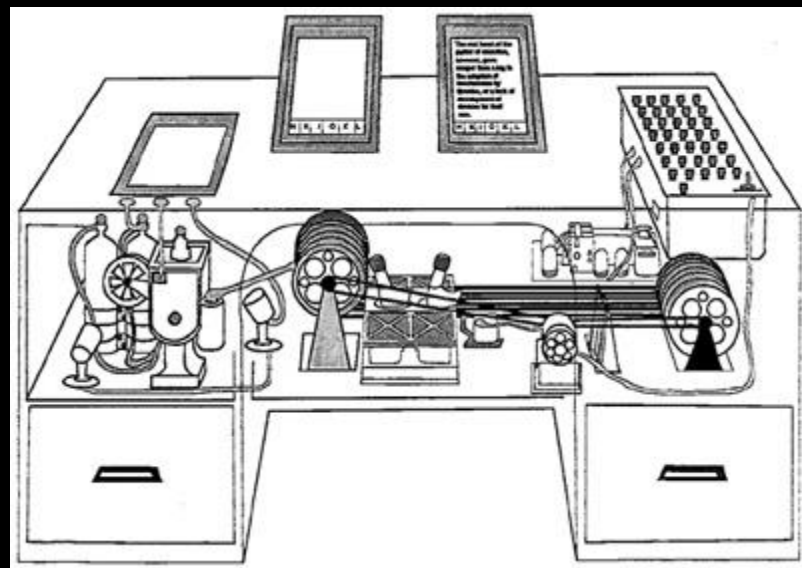
The Mondotheque

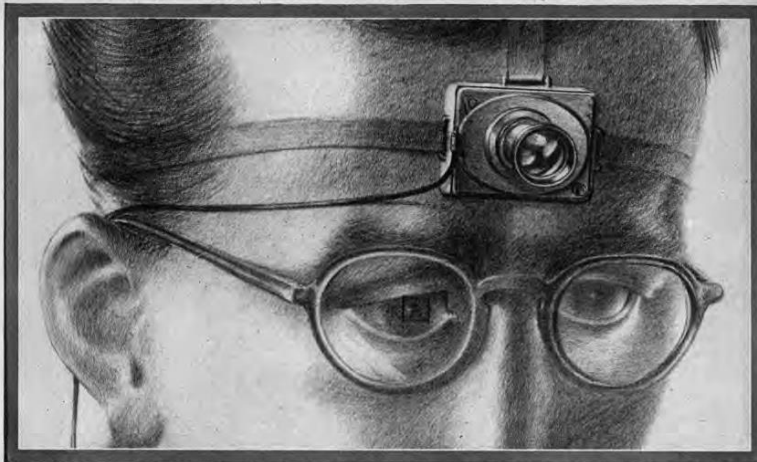


MONDOTHEQUE









A SCIENTIST OF THE FUTURE RECORDS EXPERIMENTS WITH A TINY CAMERA FITTED WITH UNIVERSAL-FOCUS LENS. THE SMALL SQUARE IN THE EYEGLASS AT THE LEFT SIGHTS THE OBJECT

AS WE MAY THINK

A TOP U. S. SCIENTIST FORESEES A POSSIBLE FUTURE WORLD IN WHICH MAN-MADE MACHINES WILL START TO THINK

by VANNEVAR BUSH

DIRECTOR OF THE OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT

Condensed from the *Atlantic Monthly*, July 1945

This has not been a scientists' war; it has been a war in which all have had a part. The scientists, burying their old professional competition in the demand of a common cause, have shared greatly and learned much. It has been exhilarating to work in effective partnership. What are the scientists to do next?

For the biologists, and particularly for the medical scientists, there can be little indecision, for their war work has hardly required them to leave the old paths. Many indeed have been able to carry on their war research in their familiar peacetime laboratories. Their objectives remain much the same.

It is the physicists who have been thrown most violently off stride, who have left academic pursuits for the making of strange destructive gadgets, who have had to devise new methods for their unanticipated assignments. They have done their part on the devices that made it possible to turn back the enemy. They have worked in combined effort with the physicists of our allies. They have felt within themselves the stir of achievement. They have been part of a great team. Now one asks where they will find objectives worthy of their best.

• • •

There is a growing mountain of research. But there is increased evidence that we are being bogged down today as specialization extends. The investigator is staggered by the findings and conclusions of thousands of other workers—conclusions which he cannot find time to grasp, much less to remember, as they appear. Yet specialization becomes increasingly necessary for prog-

ress, and the effort to bridge between disciplines is correspondingly superficial.

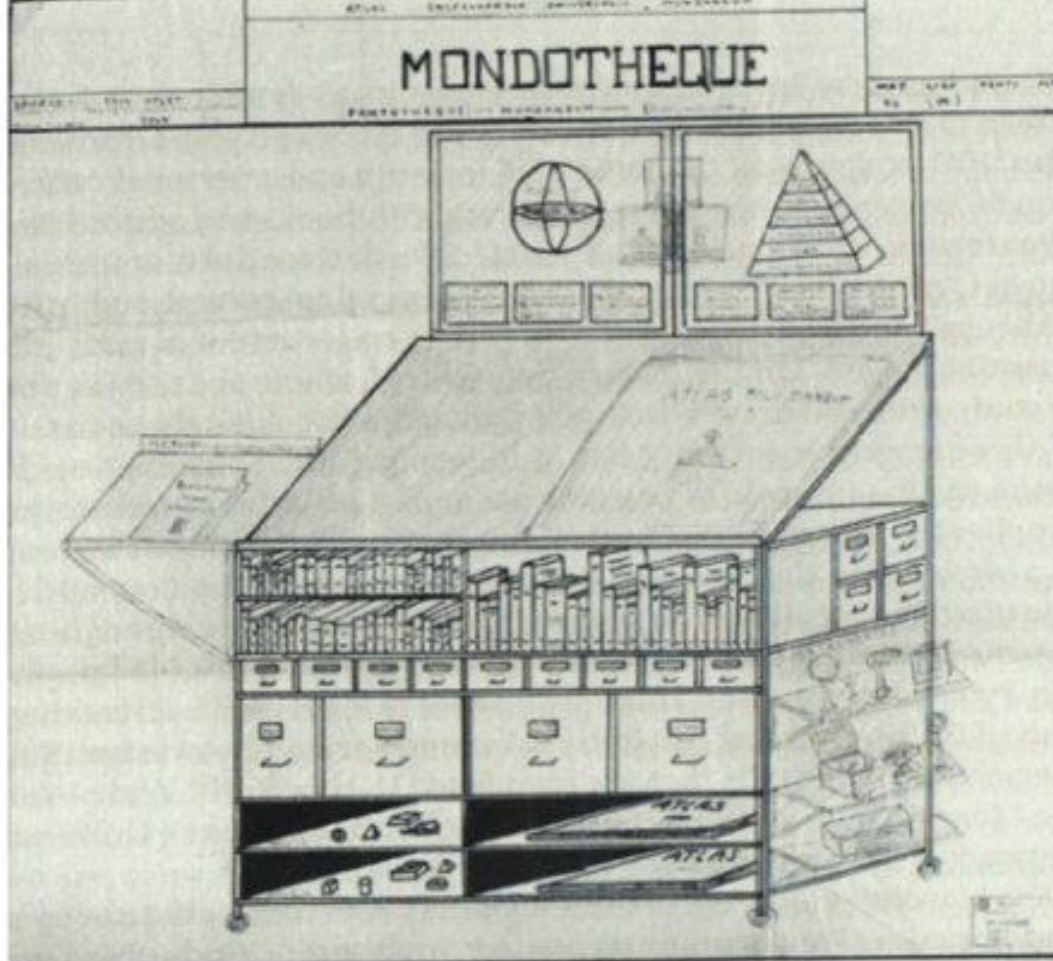
Professionally our methods of transmitting and reviewing the results of research are generations old and by now are totally inadequate for their purpose. If the aggregate time spent in writing scholarly works and in reading them could be evaluated, the ratio between these amounts of time might well be startling. Those who conscientiously attempt to keep abreast of current thought, even in restricted fields, by close and continuous reading might well shy away from an examination calculated to show how much of the previous month's efforts could be produced on call.

Mendel's concept of the laws of genetics was lost to the world for a generation because his publication did not reach the few who were capable of grasping and extending it. This sort of catastrophe is undoubtedly being repeated all about us as truly significant attainments become lost in the mass of the inconsequential.

Publication has been extended far beyond our present ability to make real use of the record. The summation of human experience is being expanded at a prodigious rate, and the means we use for threading through the consequent maze to the momentarily important item is the same as was used in the days of square-rigged ships.

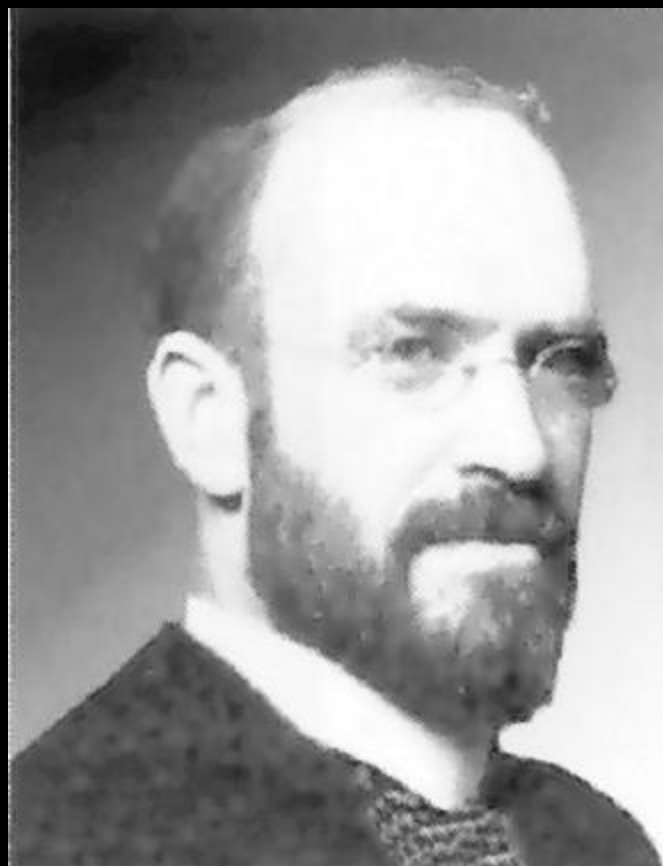
But there are signs of a change as new and powerful instrumentalities come into use. Photocells capable of seeing things in a physical sense, advanced photography which can record what is seen or even what is not, thermionic tubes capable of controlling potent forces under the guidance of

MONDOTHEQUE









LA CLASSIFICATION DÉCIMALE

INDICES COMPOSÉS DÉTAILLANT L'ANALYSE CLASSIFICATRICE.

MATIÈRES [0/9]	RELATION :	LIEU (-)	TEMPS « - »	FORME < - >	LANGUE =
0 GÉNÉRALITÉS	0 GÉNÉRALITÉS	(4) EUROPE	"11" DE 1100 à 1199	<01> THÉORIE DE	-
1	1	(42) ANGLETERRE	"12" DE 1200 à 1299	<02> TRAITÉ DE	= 2 ANGLAIS
2	2	(43) ALLEMAGNE	"13" DE 1300 à 1399	<03> ENCYCLOPÉDIE DE	= 3 ALLEMAND
3	3	(44) FRANCE	"14" DE 1400 à 1499	<04> CONFÉRENCE SUR	= 4 FRANÇAIS
4	4	(45) ITALIE	"15" DE 1500 à 1599	<05>	= 5 ITALIEN
5 SCIENCES NATURELLES	5 SCIENCES NATURELLES	(5) ASIE	"16" DE 1600 à 1699	<06>	= 6 ESPAGNOL
6 SCIENCES APPLIQUÉES.	6 SCIENCES APPLIQUÉES	(6) AFRIQUE	"17" DE 1700 à 1799	<07>	= 7 LATIN
7 BEAUX-ARTS.	7 BEAUX-ARTS.	(7) AMÉRIQUE DU NORD	"18" DE 1800 à 1899	<08>	= 8 GREC.
8 LITTÉRATURE.	8 LITTÉRATURE.	(8) AMÉRIQUE DU SUD	"19" DE 1900 à 1999	<09>	-
9 HISTOIRE & GÉOGRAPHIE	9 HISTOIRE & GÉOGRAPHIE	(9) OCÉANIE.			-

7. ART : 8 LITTÉRATURE (44) FRANCE "17" XVIII^eS. <04> CONFÉRENCE = 5 ITALIEN.

Soit : 7 LES ARTS

: 8 DANS LEURS RAPPORTS AVEC LA LITTÉRATURE

(44) EN FRANCE

« 17 » AU XVIII^e SIÈCLE

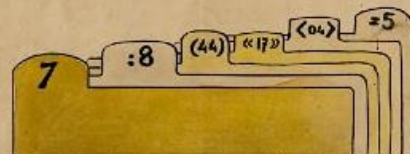
<04> CONFÉRENCE

= 5 EN ITALIEN

7 : 8 (44) « 17 » <04> = 5

7 : 8 (44) « 17 » <04> = 5

DISPOSITION DANS LES FICHIERS.



Duplicata éventuels
par REVERSION
des INDICES
COMPOSANTS.

A. POUR LE CLASSEMENT PRINCIPAL

8 : 7

B. POUR LES CLASSEMENTS
COMPLÉMENTAIRES

À BASE GÉNÉRALISANTE (44)

À BASE HISTORIQUE « 17 »

À BASE LINGUISTIQUE = 5

Index Classificateurs

DES 2^e

TAB. N° 1011

RDF Triple

subject

verb

object

Armstrong,

visited,

the moon,

1969



WIKIPEDIA The Free Encyclopedia

Article: **Neil Armstrong**
From Wikipedia, the free encyclopedia

For other people named Neil Armstrong, see Neil Armstrong (disambiguation).

Neil Alden Armstrong (August 5, 1930 – August 25, 2012) was an American astronaut and the first person to walk on the Moon. He was also an aerospace engineer, naval aviator, test pilot, and university professor. Before becoming an astronaut, Armstrong was an officer in the U.S. Navy and served in the Korean War. After the war, he earned his bachelor's degree at Purdue University and served as a test pilot at the National Advisory Committee for Aeronautics High-Speed Flight Station, now known as the Dryden Flight Research Center, where he logged over 900 flights. He later completed graduate studies at the University of Southern California.

A participant in the U.S. Air Force's Man in Space Soonest and X-20 Dyna-Son human spaceflight programs, Armstrong joined the NASA Astronaut Corps in 1962. He made his first space flight, as command pilot of Gemini 8, in 1966, becoming NASA's first civilian astronaut to fly in space. On this mission, he performed the first docking of two spacecraft, with pilot David Scott.^[1]

Armstrong's second and last spaceflight was as mission commander of the Apollo 11 moon landing, in July 1969. On this mission, Armstrong and Buzz Aldrin descended to the lunar surface and spent two and a half hours exploring, while Michael Collins remained in lunar orbit in the Command Module. Along with Collins and Aldrin, Armstrong was awarded the Presidential Medal of Freedom by President Richard Nixon, in 1976. President Jimmy Carter presented Armstrong the Congressional Space Medal of Honor in 1978, and his former classmates awarded the Congressional Gold Medal in 2009.

Armstrong died in Cincinnati, Ohio, on August 25, 2012, at the age of 82, after complications from coronary artery bypass surgery.^[2]

Neil Armstrong^[1]



Armstrong in July 1969

WIKIPEDIA The Free Encyclopedia

Article: **Moon**
From Wikipedia, the free encyclopedia

The **Moon** is the only natural satellite of the Earth^{[1][2]} and the fifth largest moon in the Solar System. It is the largest natural satellite of a planet in the Solar System relative to the size of its primary, placing 27% the diameter and 60% the density of Earth, resulting in $\frac{1}{50}$ its mass. Among satellites with known densities, the Moon is the second densest, after Io, a satellite of Jupiter.

The Moon is unique among natural satellites in that it experiences a stronger gravitational attraction to the Sun than to its primary, the Earth. As a consequence, its path is always concave to the Sun. It can be argued that this makes the Moon a planet, orbiting the Sun, rather than a satellite of the Earth. Usually, it is considered to be a satellite around the Earth, but its orbit is substantially distorted from a simple elliptical shape by the gravity of the Sun, which includes a tidal gradient which causes the Moon to be attracted less strongly in the direction of the Earth at full and New Moon than at the quarter phases (in a frame of reference in which the Earth is stationary). This perturbs the orbit so as to make its curvature more acute in the direction of the quarter phases than elsewhere. If the orbit were otherwise circular the perturbation would make it approximately elliptical, with its major axis lying along the direction of the Earth's orbit around the Sun. The Earth would be at the centre of this ellipse, some 384,000 km (239,000 miles) away. This perturbation is approximately 1% of the total, and can be calculated only very approximately by assuming the orbit to be an ellipse. Likewise, the parameters of the orbit, semi-major axis, average axis, etc., can be stated only as approximate averages.

The Moon is in a synchronous rotation with Earth, always showing the same face with its most easily visible features: near the 90 between the bright crescent coastal highlands and the prominent impact craters. It is the brightest object in the sky after the Sun, although its surface is actually very dark, with a reflectance similar to that of coal. Its prominence in the sky and its regular cycle of phases have, since ancient times, made the Moon an important cultural influence on

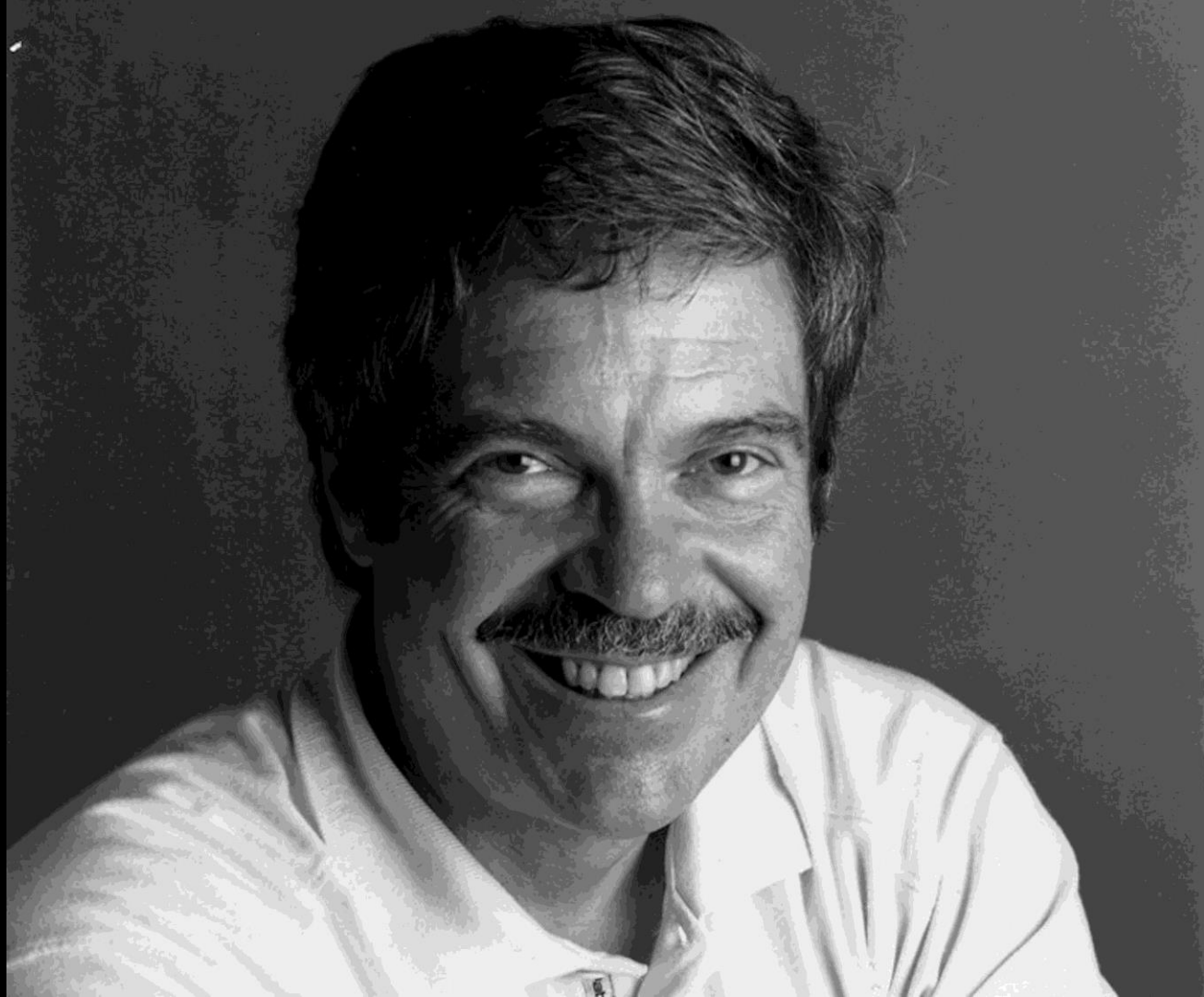
The Moon^[1]

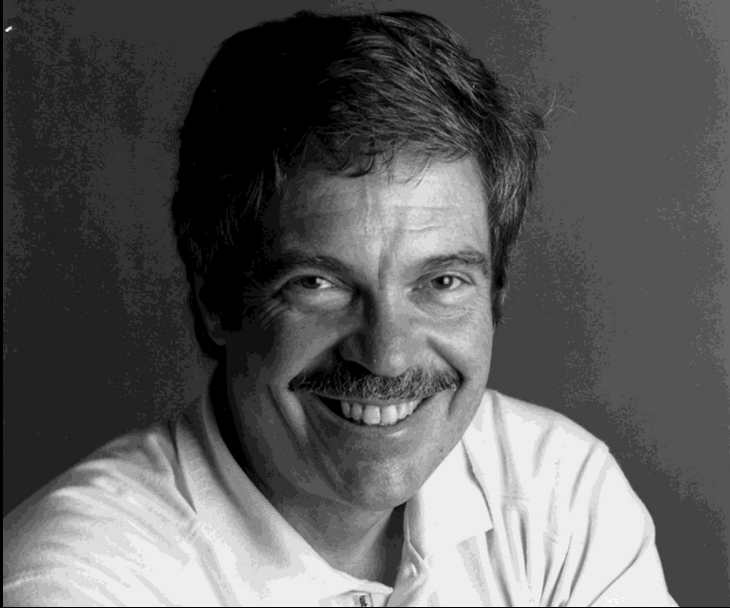


Full Moon as seen from Earth's surface, captured from the International Space Station

Attribute	Unit	Value
Orbital inclination	degrees	5.145
Perigee	km	363,300
Apogee	km	405,500
Semi-major axis	km	384,400
Mean distance	km	384,399
Orbital period	days	29.5306
Orbital velocity	km/s	1.022



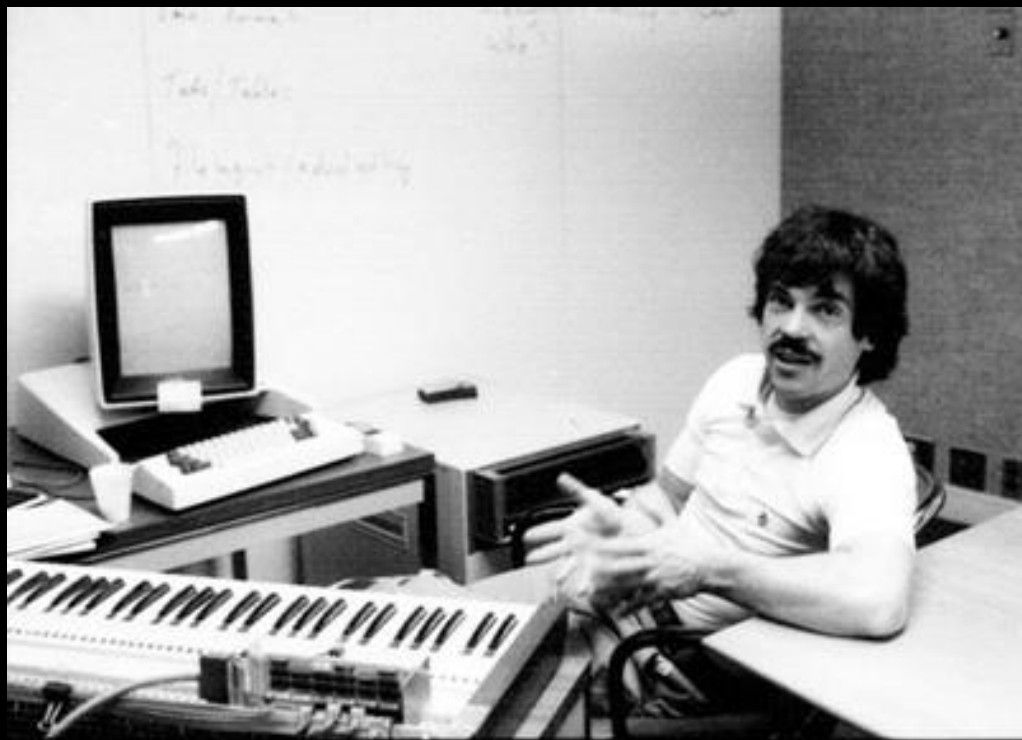


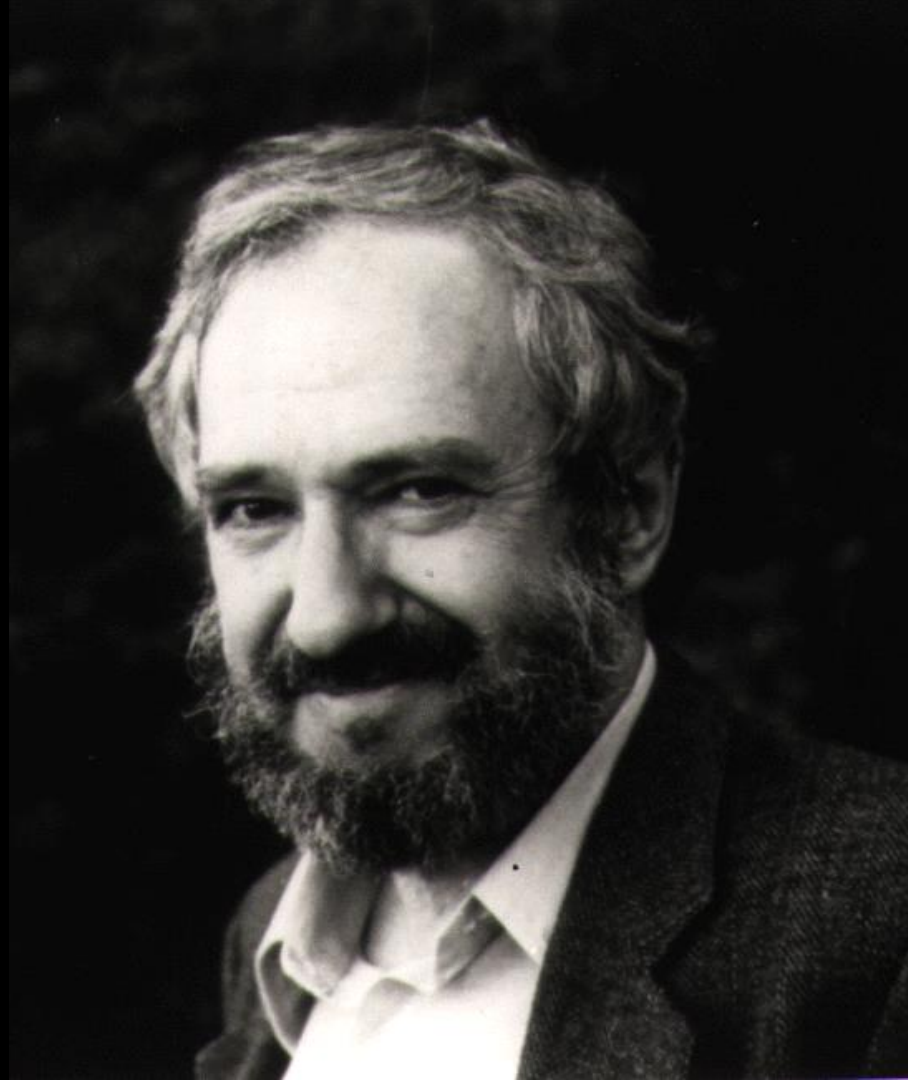


“I had read maybe 150
books by the time I hit
1st grade. And I already
knew that the teachers
were lying to me.”

- Alan Kay







★ Terrapin Logo

File Edit Debug Window Help



★ C:\Program Files\Terrapin\Terrapin Logo\30402\Mr1ms....

```
TO TURTLE.BACK :DIST
  BACK :DIST
  MOVEMENT :DIST :MCW :MCW
END

TO TBK :DIST
  TURTLE.BACK :DIST
END

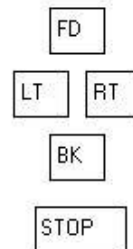
TO TURTLE.LEFT :DEGREES
  LEFT :DEGREES
  MOVEMENT :DEGREES * 0.1 :MCCW :MCW
END

TO TLT :DEGREES
  TURTLE.LEFT :DEGREES
END
```

Graphic Area



LOGO Turtle

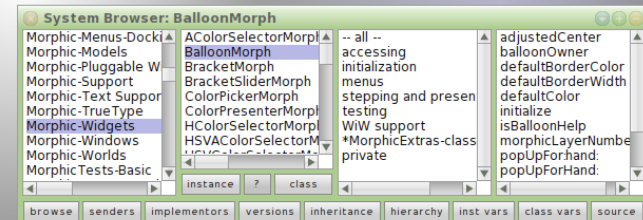


★ Listener

```
OPERATE defined
edit
operate
Stopped!
edit
operate
|
```

**Command Window
Logo Prompt**





A balloon with text used for the display of explanatory information.

Balloon help is integrated into Morphic as follows:

If a Morph has the property `#balloonText`, then it will respond to `#showBalloon` by adding a text balloon to the world, and to `#deleteBalloon` by removing the balloon.

Moreover, if mouseOverE

display of the balloon afte

of the balloon when the m

class comment for Balloon

Welcome to Squeak 4.2

This is a list of the main achievements that went into the trunk image.

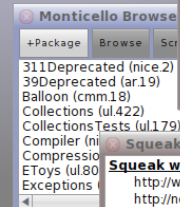
Ready for next-generation VM

A new virtual-machine, known as "Cog", is about to be released for Squeak. It's a complete rewrite from the ground-up, employing a Context-to-Stack mapping design onto which a JIT compiler for Intel-compatible hardware results in, roughly, a 3X across-the-board performance improvement. Specific Benchmarks vary much more widely (from 1x to 5x, with some people claiming 10x for specifics).

Significant class-library and IDE improvements

Many enhancements, fixes, documentation and performance improvements to the class-library and IDE tools. A new number parser allows greater flexibility in the expression of numbers. Finalization enhancements.

An efficient window-resizing gesture allows Squeak windows to be quickly and easily manipulated, much like modern "tabletop" technologies.



Squeak Online Resources

Squeak web sites

- <http://www.squeak.org> - The main Squeak site.
- <http://news.squeak.org> - The Weekly Squeak
- <http://board.squeak.org> - The Squeak Oversight Board
- <http://ftp.squeak.org> - Downloads for many Squeak versions.
- <http://squeakvm.org> - Development of the Squeak virtual machine

Squeak-dev - The main Squeak mailing list

- <http://lists.squeakfoundation.org/mailman/listinfo/squeak-dev>
- <http://dir.gmane.org/gmane.comp.lang.smalltalk.squeak.general>
- <http://n4.nabble.com/Squeak-Dev-f45488.html>

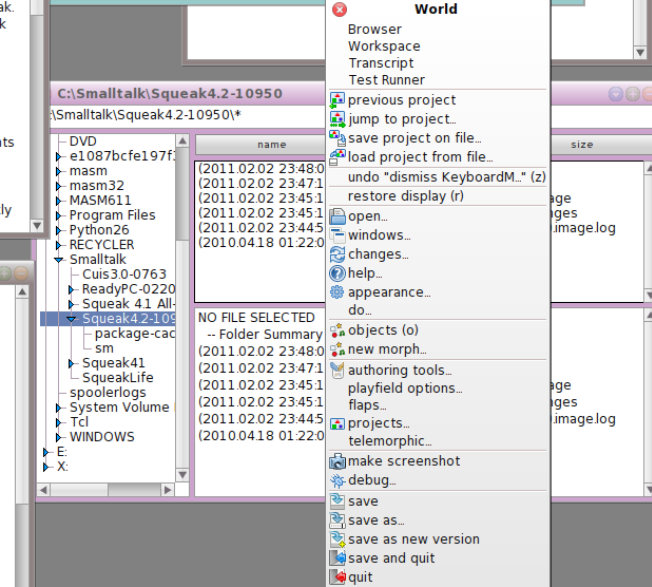
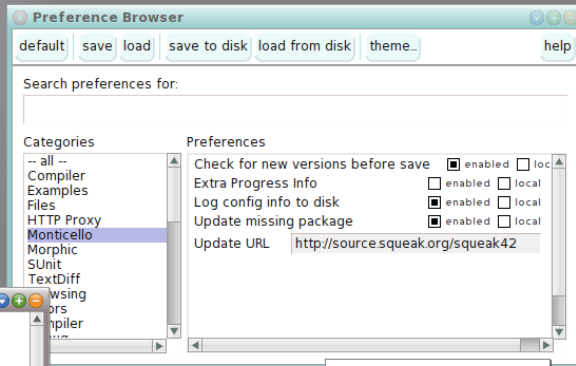
Squeak-Beginners - The place to ask even the most basic questions

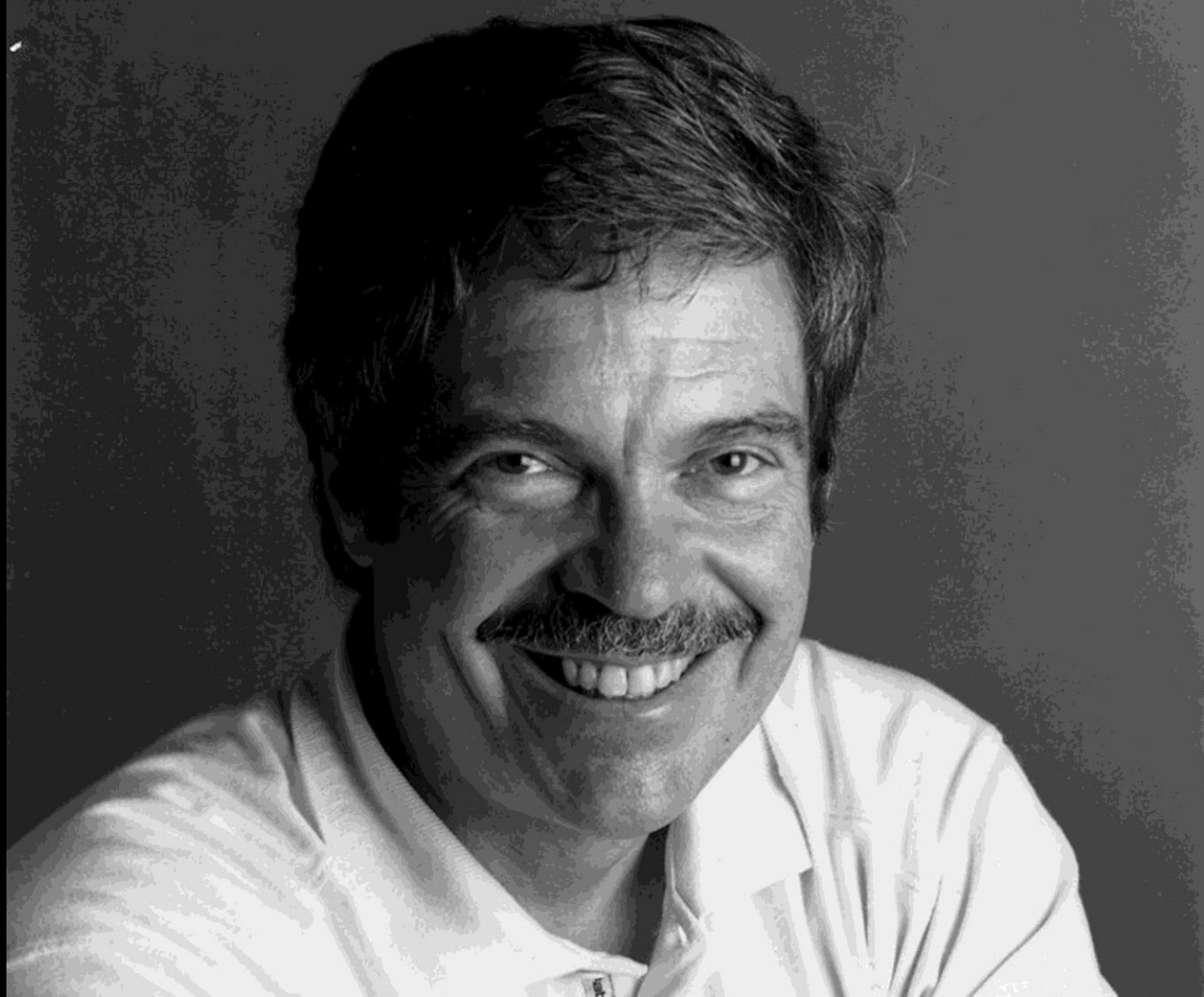
- <http://lists.squeakfoundation.org/mailman/listinfo/beginners>
- <http://dir.gmane.org/gmane.comp.lang.smalltalk.squeak.beginners>
- <http://n4.nabble.com/Squeak-Beginners-f107673.html>

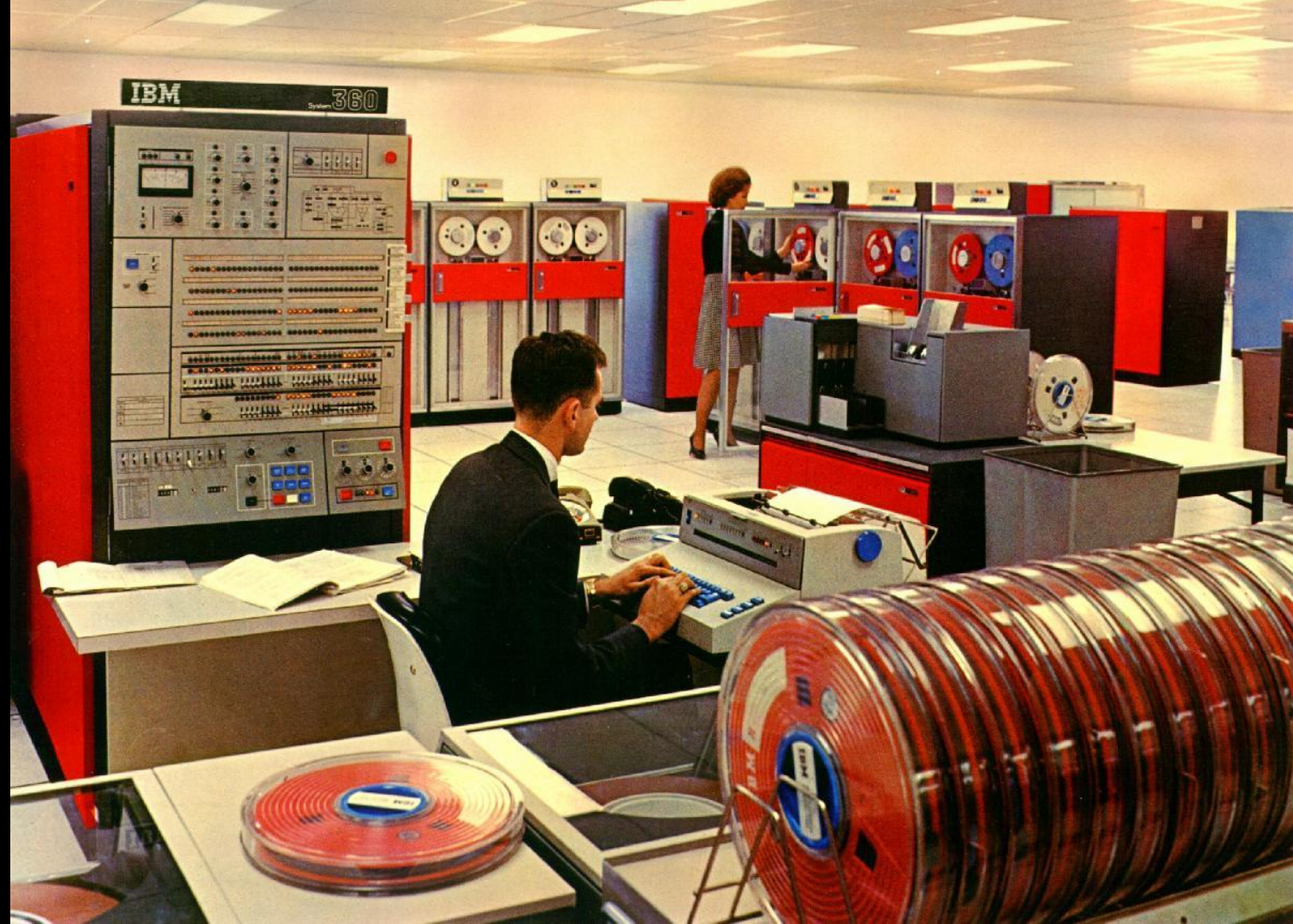
Squeak By Example

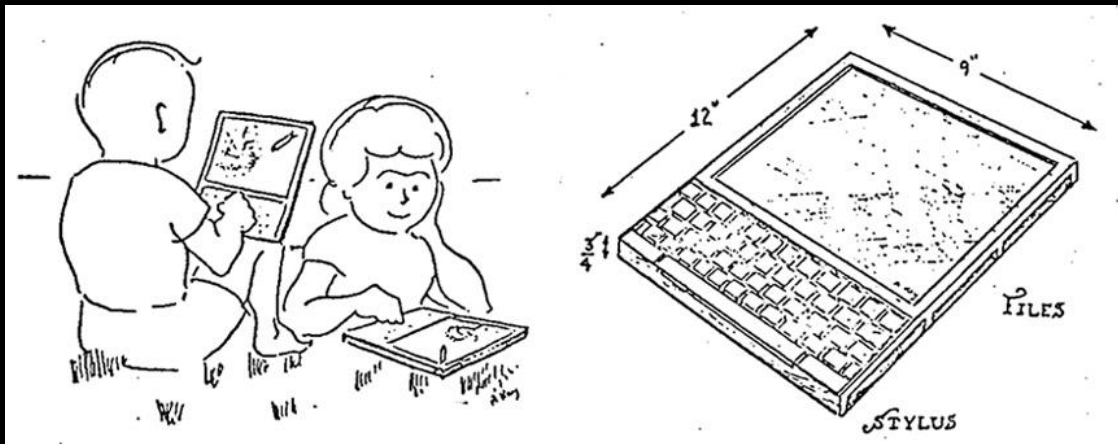
- <http://www.squeakbyexample.org/>

Squeak - Open Personal Computing and Multimedia



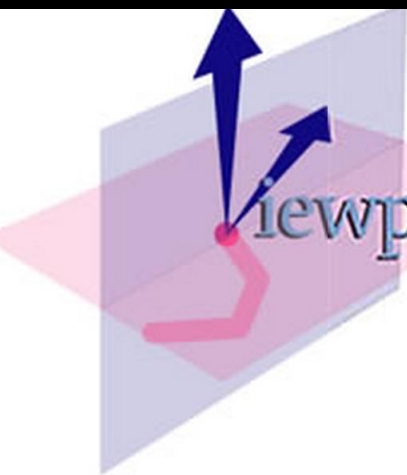












iewpoints Research Institute

1025 Westwood Boulevard, 2nd Floor, Los Angeles, CA 90024 tel. (310) 208-0524

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President

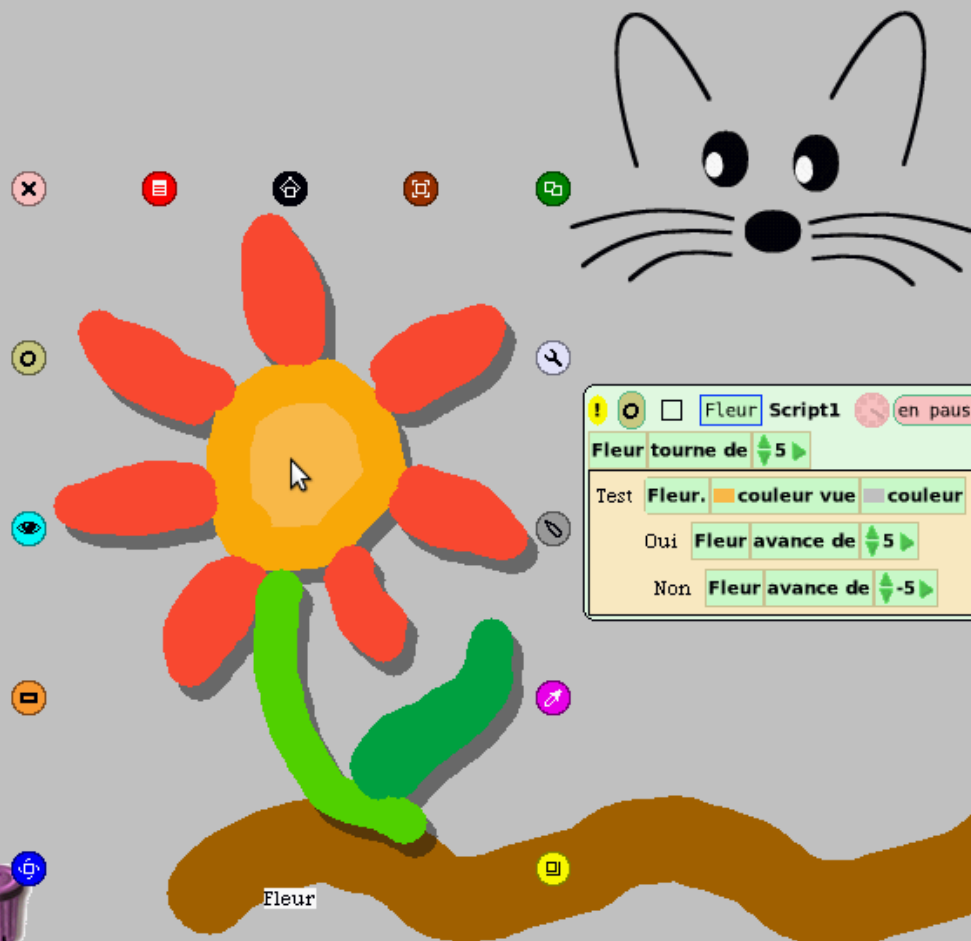
Alan Kay

Executive Director

Kimberly Rose

What is Viewpoints Research Institute?

Viewpoints Research Institute (VRI) is a 501(c)(3) nonprofit public benefit organization



Fleur Script1 en pause

Fleur tourne de 5

Test Fleur. couleur vue couleur

Oui Fleur avance de 5

Non Fleur avance de -5

v Fleur

scripts

- Fleur Script1 en pause
- Fleur script vide

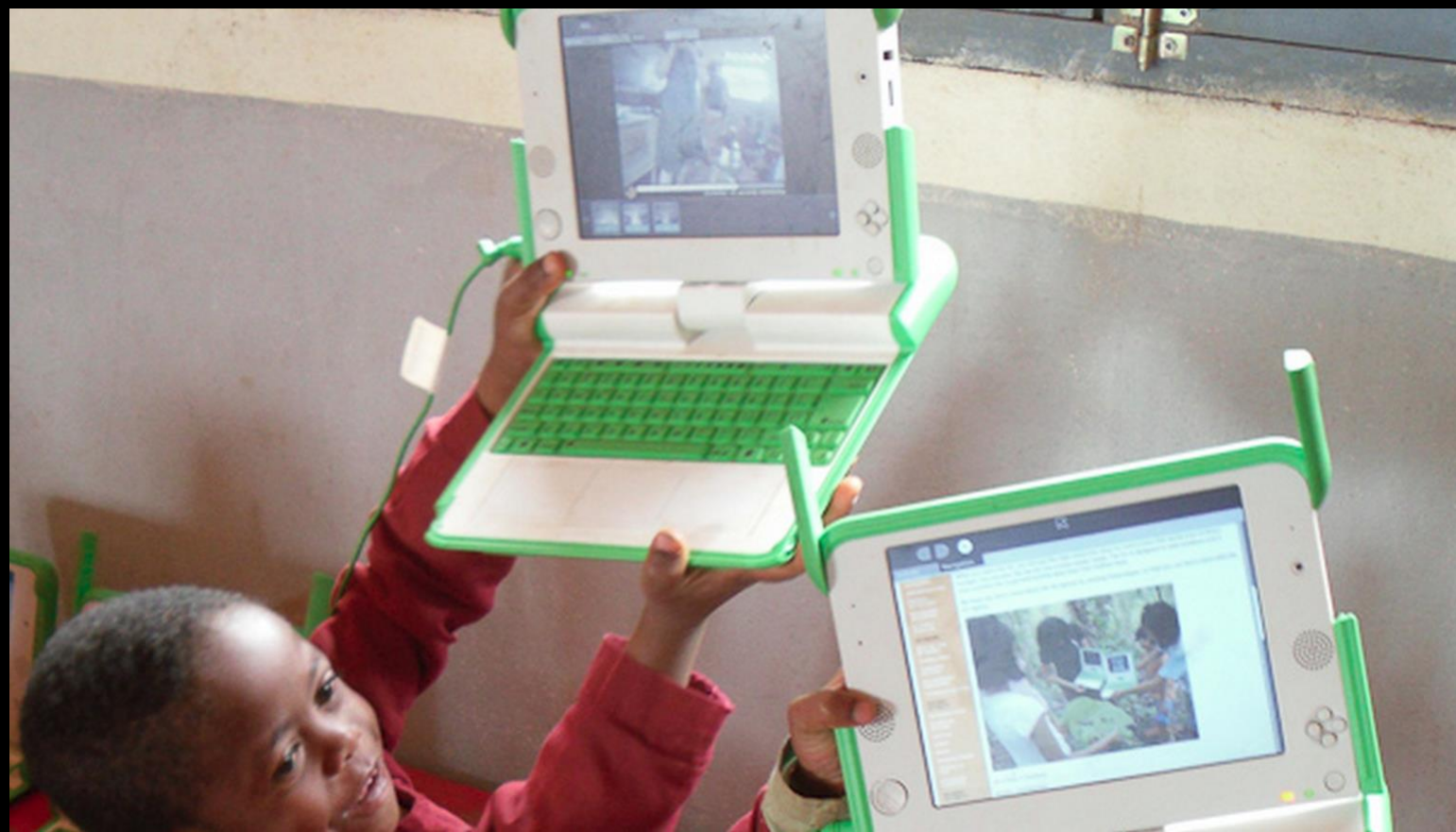
Rechercher

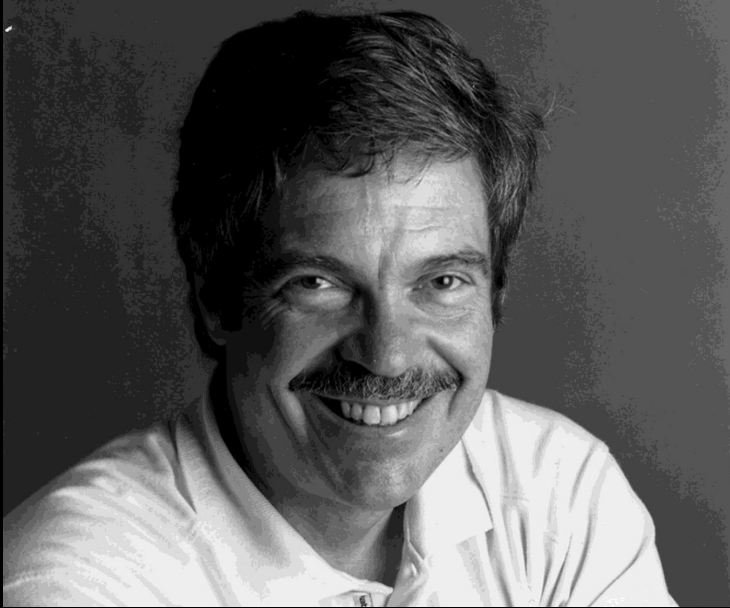
base

- Fleur joue son croah
- Fleur avance de 5
- Fleur tourne de 5
- Fleur. x 206
- Fleur. y 310
- Fleur. cap 0

tests

- Fleur. barrières faux
- Fleur. chevauche Fleur
- Fleur. couleur vue
- Fleur. est sous souris vrai
- Fleur. intersection avec Fleur
- Fleur. isOverColor couleur
- Fleur. touche un Fleur





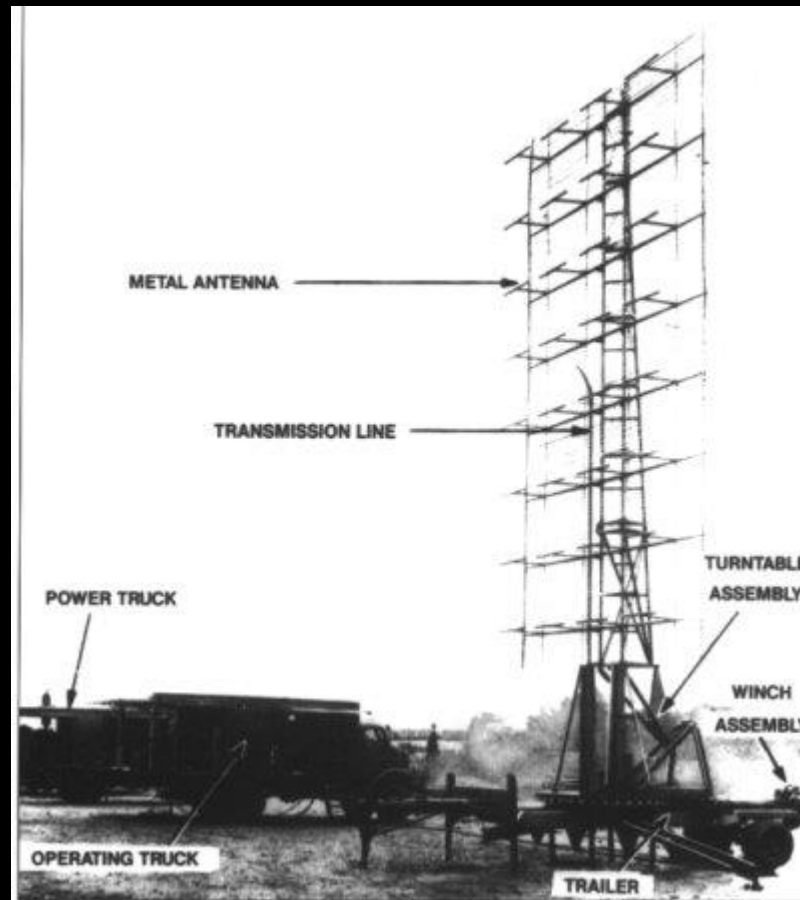
“The best way to predict
the future is to invent it.”

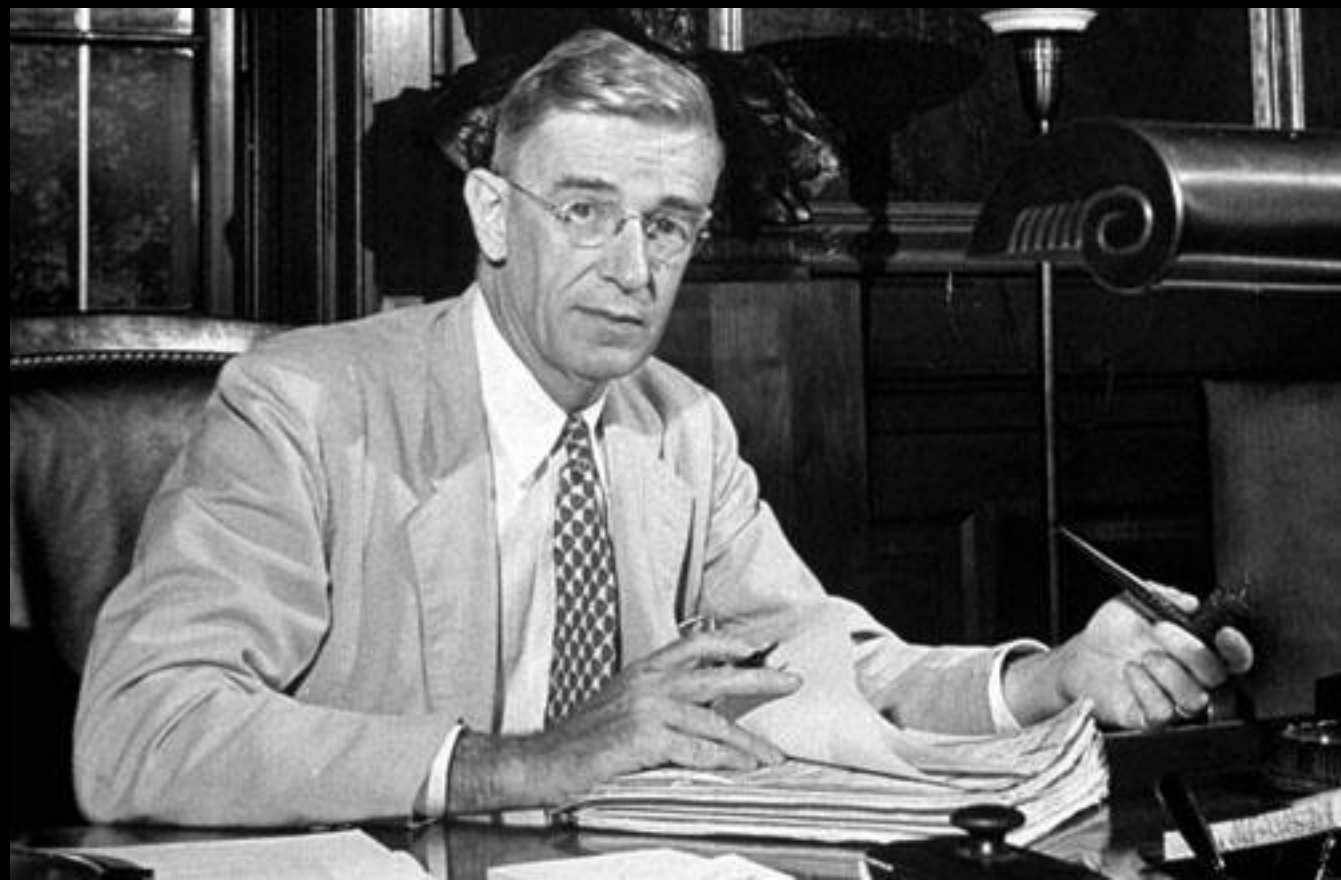
- Alan Kay

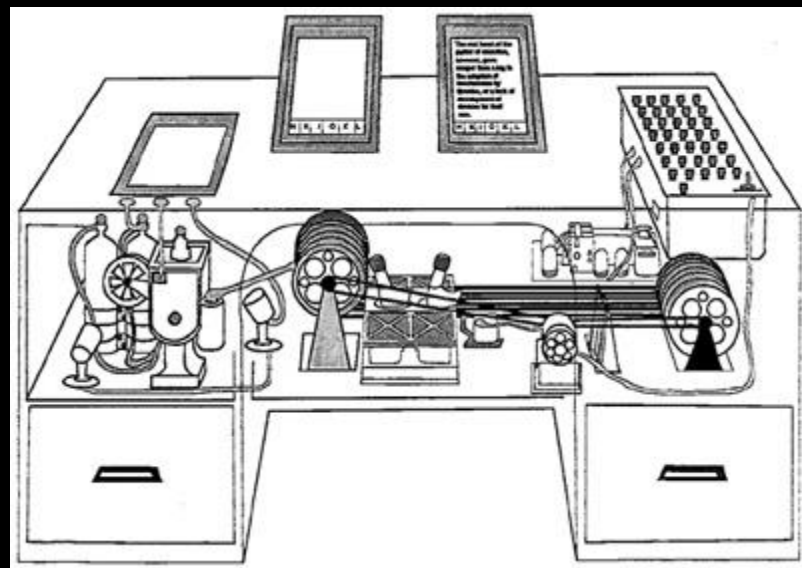
Collective Intelligence











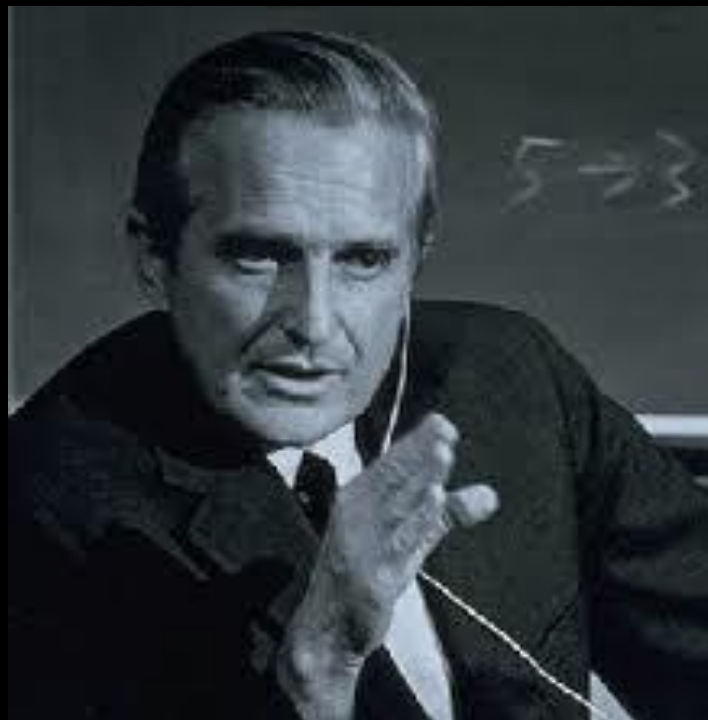




“I decided that I would
focus my career on making
the world a better place for
humankind.”

- Douglas Engelbart







ORANGES
APPLES
BANANAS
CARROTS
LETTUCE
BEANS
CANS
APPLE SAUCE
BEAN SOUP
TOMATO SOUP
CEREALS
BREAD
NOODLES (ELBOW KIND)
FRENCH BREAD
COLD LOCKER
MILK





12/09/68 1711:55

2 ALL
B2LV

JUMP TO SUCCESSOR
1

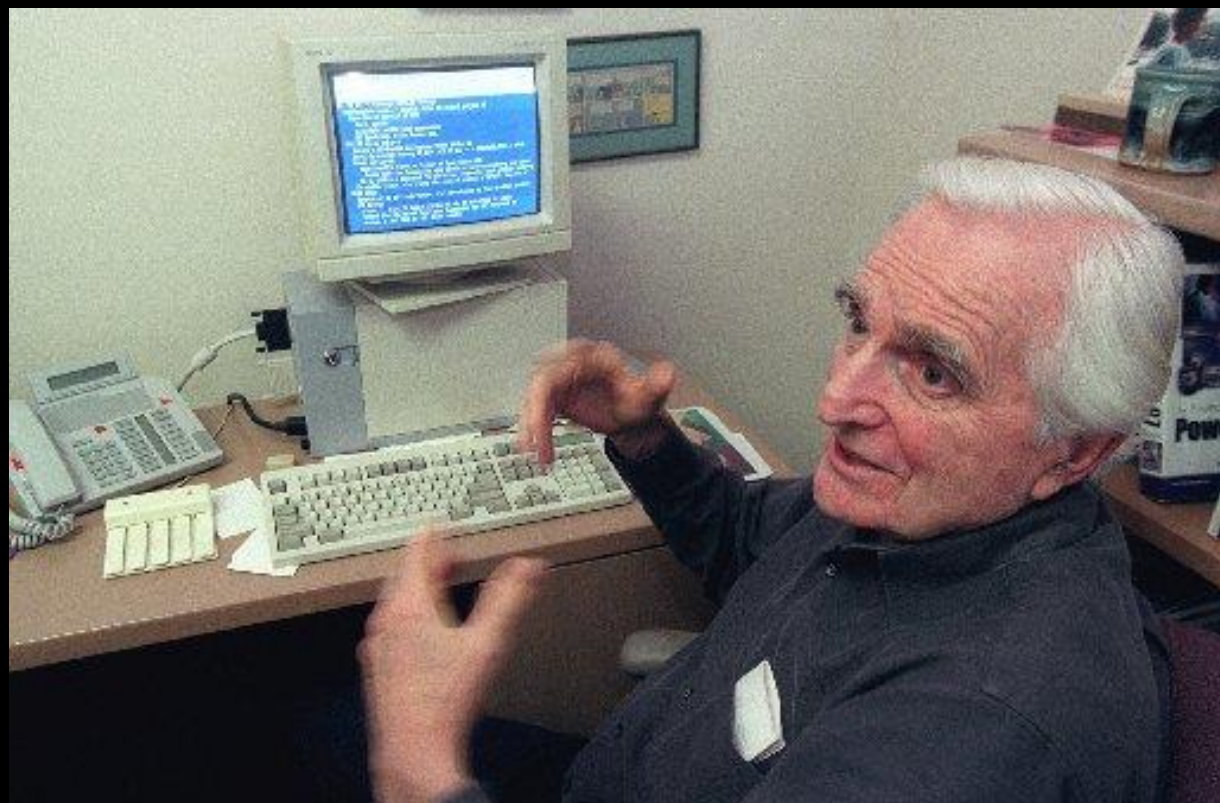
'COLD' RETRIEVAL -- UNKNOWN DESTINATION
DIRECT -- HIERARCHY -- CATEGORIZATION
FOR EXAMPLE, WHAT IS THE DIRECTIVE TO GET
ROMAN NUMERALS FOR PAGE NUMBERS? SEE
| INLS.DIRECT.1:SGDB)
INDIRECT -- KEYWORDS -- ASSOCIATIVE REORDERING
SEE INLS.SYSD.DOCIND:SGXNZ)



- Windowing
- Hypertext
- Graphics
- Command input
- Video conferencing
- Computer mouse
- Word processing
- Dynamic file linking
- Revision control
- Real-time collaborative editing







DOUG ENGELBART INSTITUTE

"Boosting mankind's capability for coping with complex, urgent problems"
- Doug Engelbart

 hide header

SEARCH

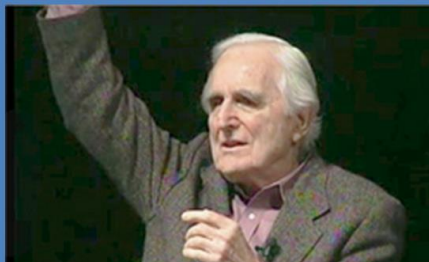
- ▶ Home
- ▶ About
- ▶ Big Idea
- ▶ Projects
- ▶ History
- ▶ Library
- ▶ Press

Living History *The Engelbart Archive*

San Francisco, 1968



Doug's Driving Vision *A Call to Action*



The Engelbart Challenge *Creating a Brilliant World*

Put Doug's vision to work in your organization or project with [Bootstrapping Innovation](#). Join the [Engelbart Challenge](#), where organizations making a difference in

Machine Dreams



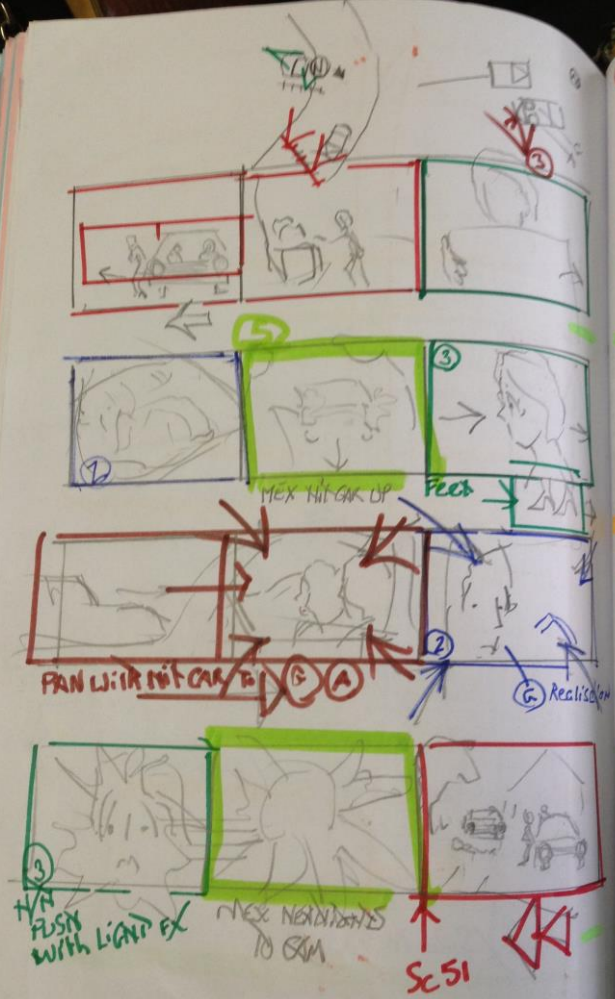












1 2
Husbands
NICOLA climbs
dress. She loo
NICOLA backtra
She takes a lo
NICOLA steps
looks alright
BANKS NICOLA
FIFTH COMMERCIAL

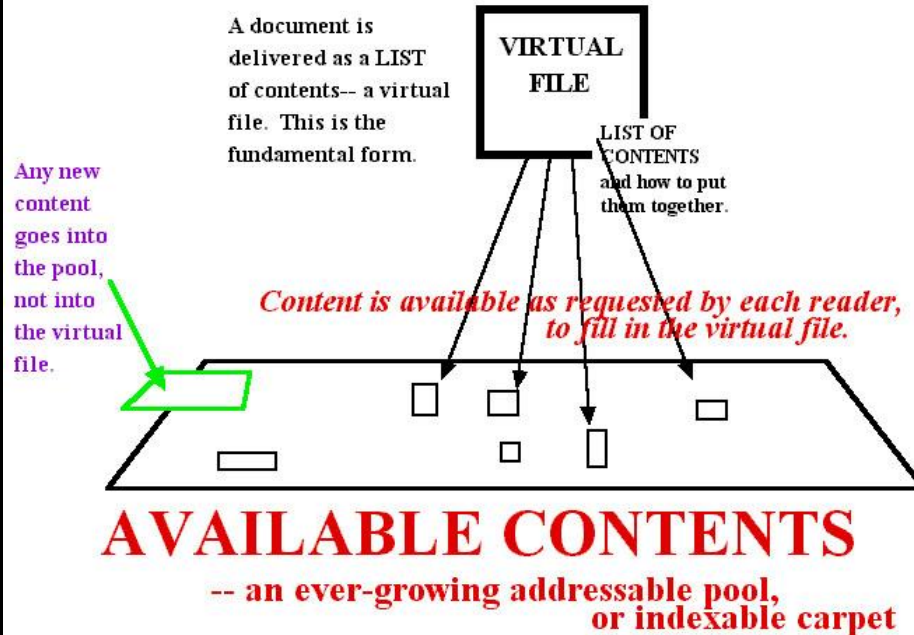
EXT. SUBURBAN
GEMMA, ABI, NI
Out of the dar
sequence -
ABI and GEMMA
road in her go
They can see
GEMMA saying
"Nicola!" The
They turn her
injury to the
from it. A l
Abi checks he
response.
As the driver
In a state of
And here's th
Siren walling
headlights:

INT. JUSTIN
NIL CAST
Powerful mus
The new wash
dodgily fast
faintly from
abandoned it
INT. HOSPITAL
LEWIS, MARK
PATIENTS

AN AUTHOR-BASED, LITERARY AND CULTURAL DESIGN

The Xanadu Document Model

-- built on the assumption of perpetual change and re-use



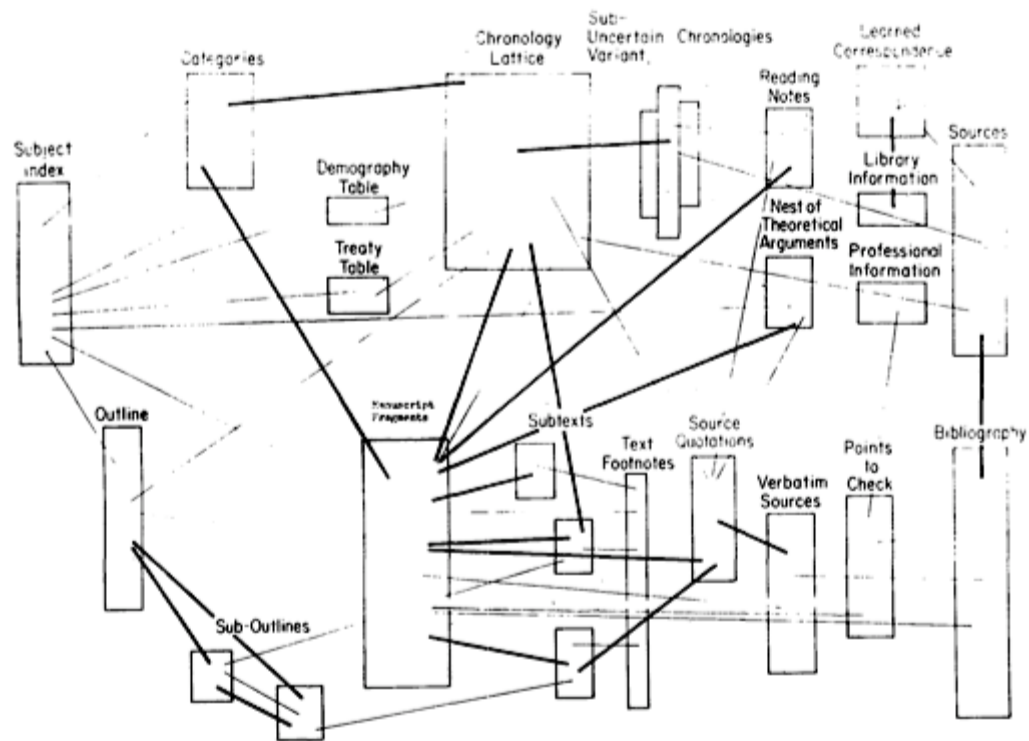


FIGURE 4—ELF's capacity for total filing: hypothetical use by historian. Thin lines indicate links; heavy rules indicate some of same entries.

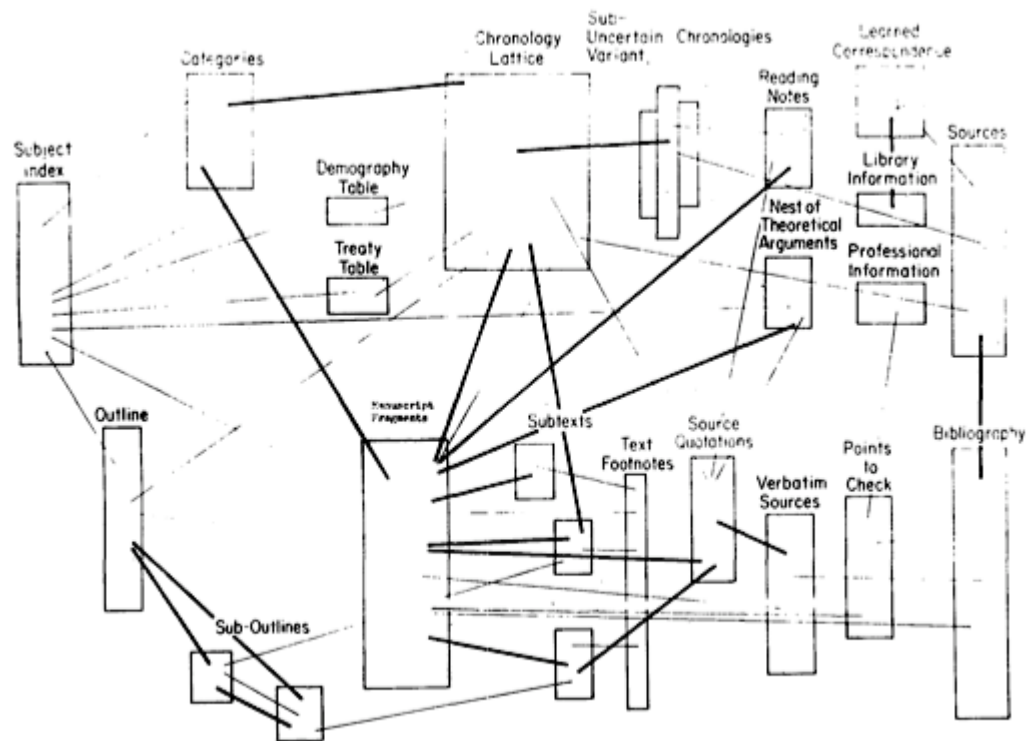
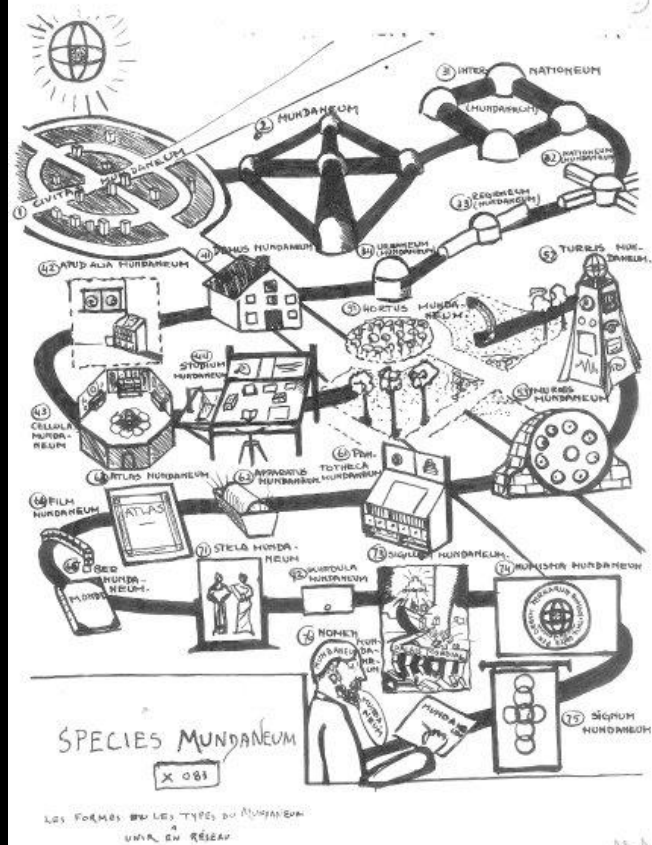


FIGURE 4—ELP's capacity for total filing: hypothetical use by historian. Thin lines indicate links; heavy rules indicate some of same entries.





- Hypertext
- Hypermedia
- Hyperdata
- Transclusion
- Intertwined

SEVEN DOLLARS.
FIVE DOLLARS
THREE DOLLARS



COMPUTER

You can and must understand computers Now.

BOOK
ST
CO
#

JULIAN
WYEN

Ne lan

COMPUTER LIB

DREAM MACHINES



New Freedoms Through Computer Screens
— a Minority Report

This is the flip side of Computer Lib.

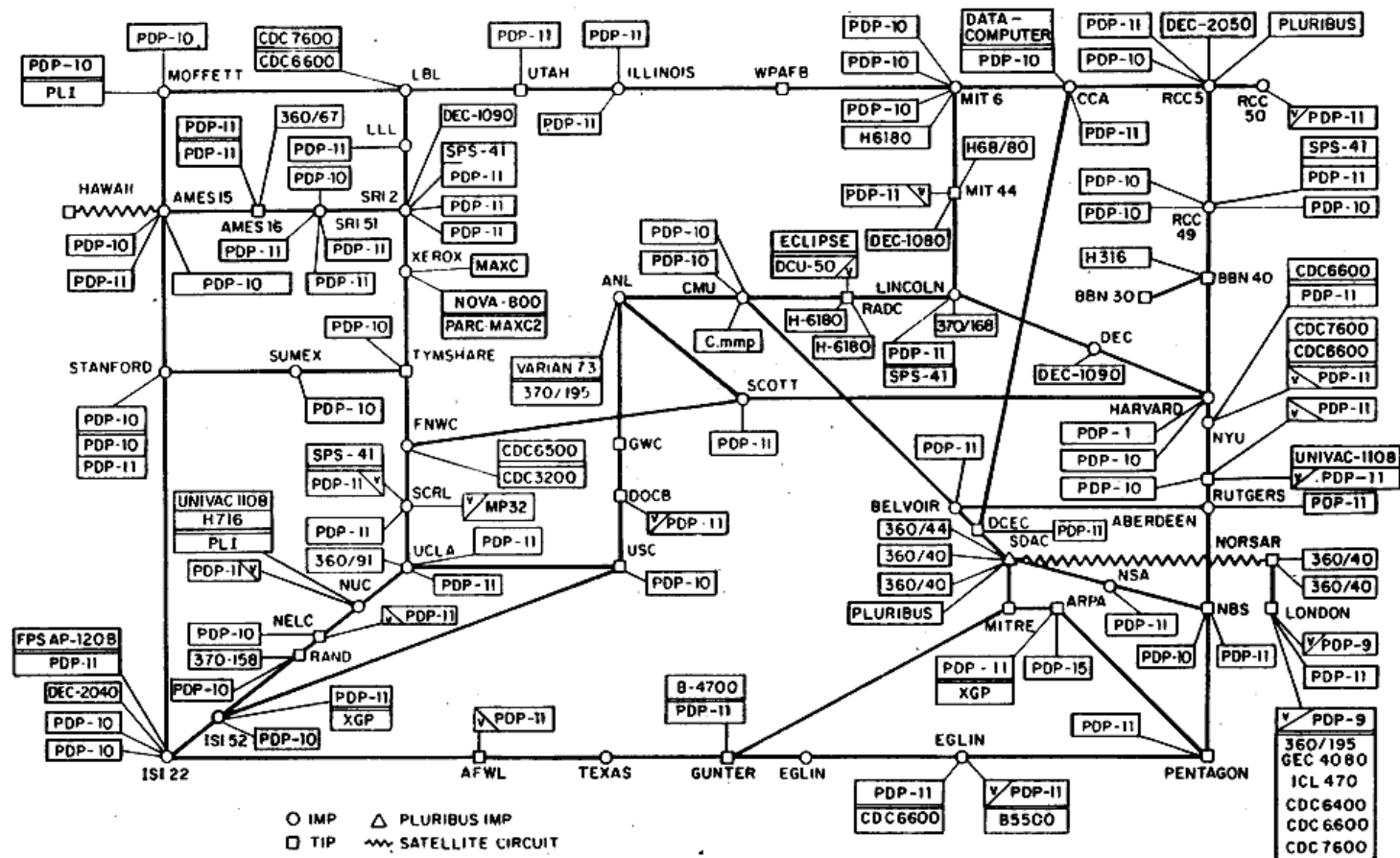


“The purpose of
computers is
freedom.”

- Ted Nelson



ARPANET LOGICAL MAP, MARCH 1977



(PLEASE NOTE THAT WHILE THIS MAP SHOWS THE MOST POPULATION OF THE NETWORK ACCORDING TO THE BEST INFORMATION OBTAINABLE, NO CLAIM CAN BE MADE FOR ITS ACCURACY)

NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES



Xanadoc

Source: SampleContent/Xanadox/MoeJuste/1-zxcvb.xanadoc

The creation of the universe is described in the King James Bible like this:

1:1 In the beginning God created the heaven and the earth.

1:2 And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

1:3 And God said, Let there be light: and there was light.

God then goes on to make Eve, she and Adam are expelled from the Garden, they have sons who somehow meet other women and populate the earth.

There are interesting variants. For instance, in one of the Apocrypha ("The Alphabet of Ben Sira"), it is stated that the first woman is Lilith, who refuses to to accept a sex-on-the-bottom position, and to whom Adam grants equality--

Adam and Lilith began to fight. She said, 'I will not lie below,'





An Homage to Douglas Engelbart and a Critique State of Tech

By JOHN MARKOFF

DECEMBER 16, 2013 3:16 PM

21 Comments



Email



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“For Doug that
great demo was
just the beginning.”

- Ted Nelson



Tim Worstall
Contributor

FOLLOW

*I have opinions
about economics,
finance and public
policy.*

[full bio](#) →

Opinions expressed by Forbes
Contributors are their own.



▲ CONFERENCES AND MORE

TECH 5/19/2013 @ 10:47AM | 11,411 views

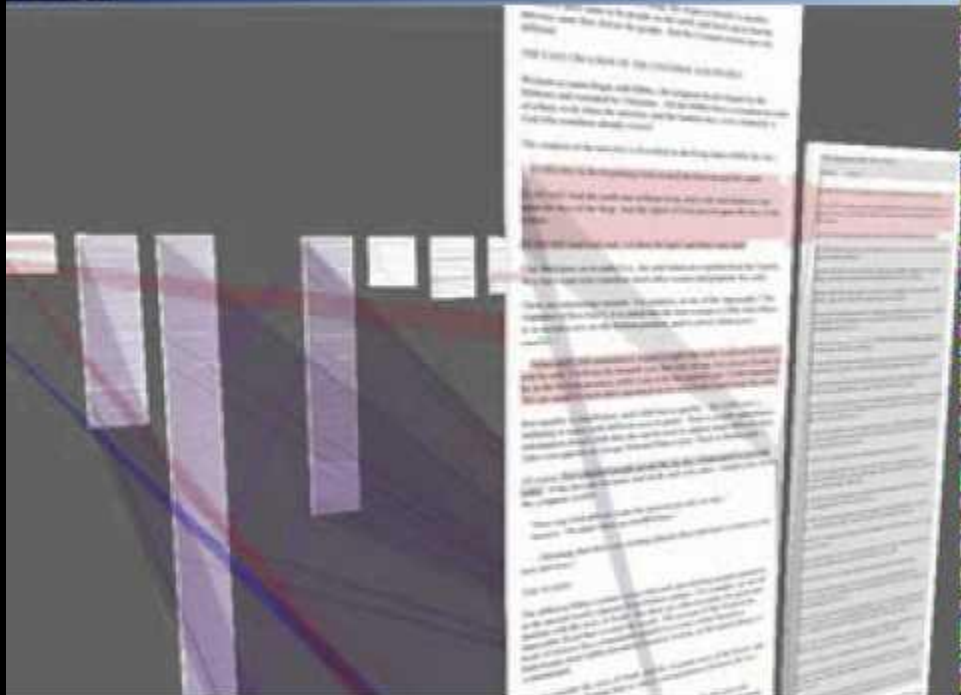
Ted Nelson Says That Bitcoin's Satoshi Nakamoto Is Shinichi Mochizuki

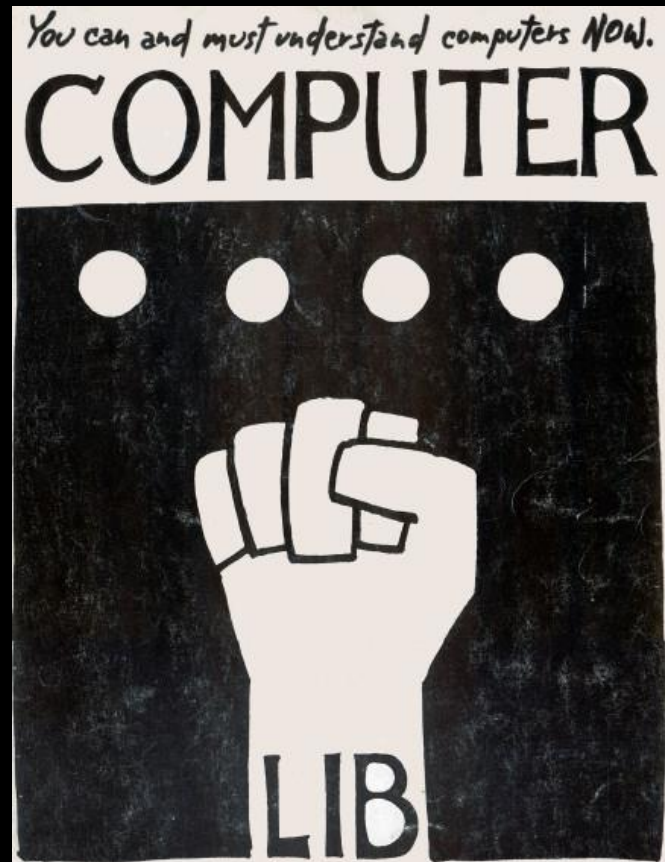
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The computer visionary claims to have worked out who is the real person behind the pseudonym of Satoshi Nakamoto. Nakamoto of course being the name behind the original plans and code for Bitcoin. It's an, umm, how to put this politely, an ambitious claim to be sure. For Nelson doesn't actually provide any evidence: only says that it could be true. And it's something of a leap to go from could be true to is true.

Here's the actual video where he makes the claim:

IN A
FUL
THR
YOU





World City





The Origins of Information Science and the International Institute of Bibliography/International Federation for Information and Documentation (FID)

W. Boyd Rayward

Faculty of Professional Studies, University of New South Wales, Sydney, 2052 NSW, Australia.
E-mail: w.rayward@unsw.edu.au

This article suggests that the ideas and practices embraced by the term "documentation," introduced by Paul Otlet and his colleagues to describe the work of the International Institute of Bibliography (later FID) that they set up in Brussels in 1895, constituted a new "discursive formation," to echo Foucault. While today's special terminology of information science was not then in use, this should not obscure the fact that key concepts for information science as we now understand this field of study and research—and the technical systems and professional activities in which it is anchored—were implicit in and operationalized by what was created within the International Institute of Bibliography in 1895 and the decades that followed. The ideas and practices to be discussed would today be rubricated as information technology, information retrieval, search strategies, information centers, fee-based information services, linked data bases, database management software, scholarly communication networks, multimedia and hypertext, even the modern, diffuse notion of "information" itself. The article argues that important aspects of the origins of information science, as we now know it in the U.S. and elsewhere in the English-speaking world, were contained within or became an extension of the discursive formation that we have labeled "documentation."

Introduction

At first sight, it is curious to discuss the history of information science in terms of the creation of an international organization in Belgium in 1895, an organization with which there has been very little sustained contact in the English-speaking world. Especially is this so as we are told that the term "information science" was first used only in 1955 (Shapiro, 1995). But even a cursory examination of the history and activities of the International Institute and Office of Bibliography suggests their

fundamental importance in the development of what we now call information science.

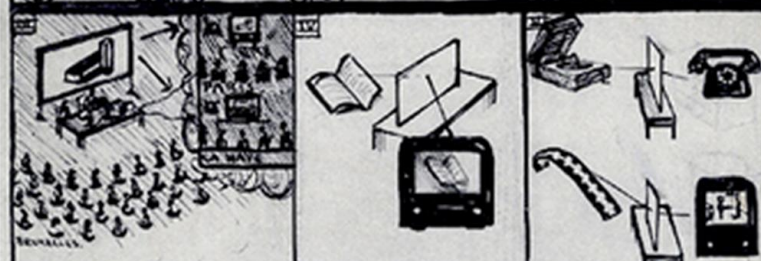
The Office and the Institute were closely related organizations. The Office was subsidized by, and was legally responsible to, the Belgian government and functioned essentially as the administrative center for the Institute. For ease of reference here, both organizations will generally be referred to simply as the Institute or IIB. They were created to support new systems to exploit the potentialities inherent in the information technology of the time. Over a period of about 40 years, there was an interesting reciprocal interplay between actual system development, what might be described as hyperbolic extrapolation from the existing systems—the grand system vision propounded in various places by Paul Otlet (see, e.g., the papers in Rayward, 1990)—and the gradual elaboration of the fairly sophisticated theoretical framework within which the systems were originally created, reaching its fullest expression Otlet's *Traité de Documentation* (Otlet, 1934). This framework involved new ways of looking at and speaking about aspects of the world of knowledge, books, and libraries, and the social infrastructure of which they were part. This complex interrelation of systems and rationalization established what we might call, after Foucault, a new "discursive formation" (Foucault, 1972). A "discursive formation," for which, embracing Otlet's own neologism for ease of reference, the transitional term, "documentation," is useful.

This new "discursive formation" involved the promulgation of new ideas, the identification of what were regarded as new phenomena, and changes in language practices, especially the elaboration of a new terminology. It also required the creation of new formal structures of communicating individuals and the development of new tools and techniques for information handling. As it emerged, it found formal expression in a considerable volume of special publications that ranged from, and were often mixtures of, practical manuals and guides, theoretical

A version of some of the content of this article appeared in Rayward (1994).

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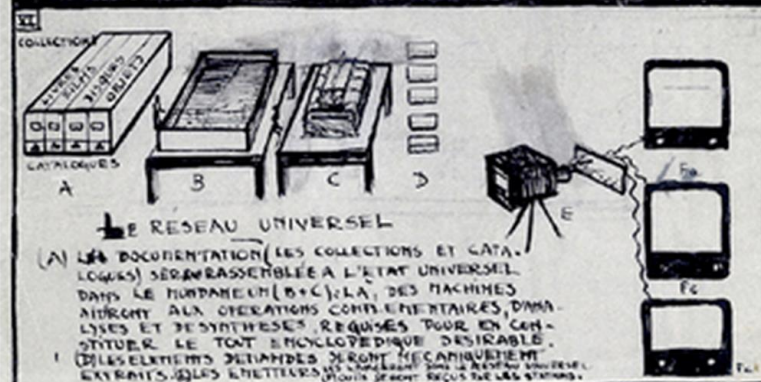


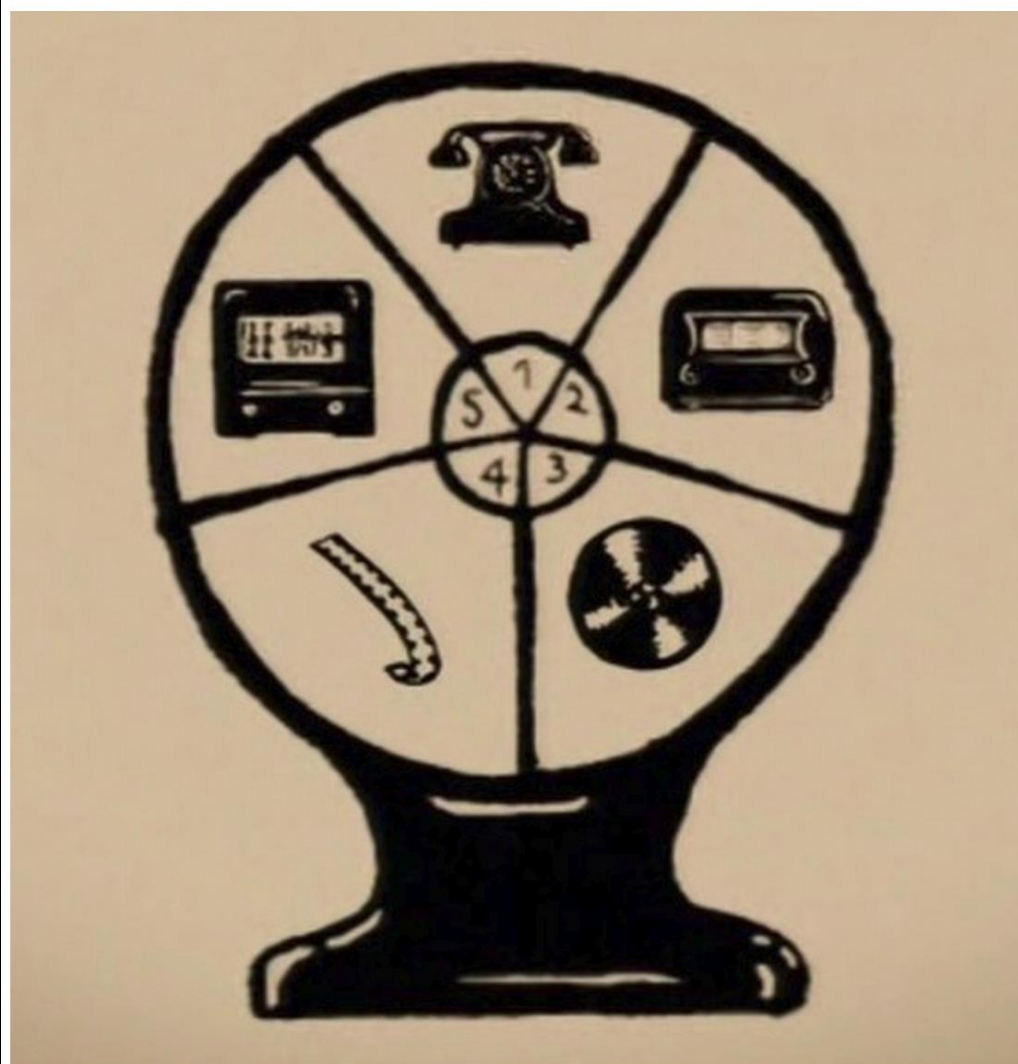


SEANCE DE COMITES TENUE PAR TELESCOPE DE MEMBRES A DISTANCE ET SUR PLACE.

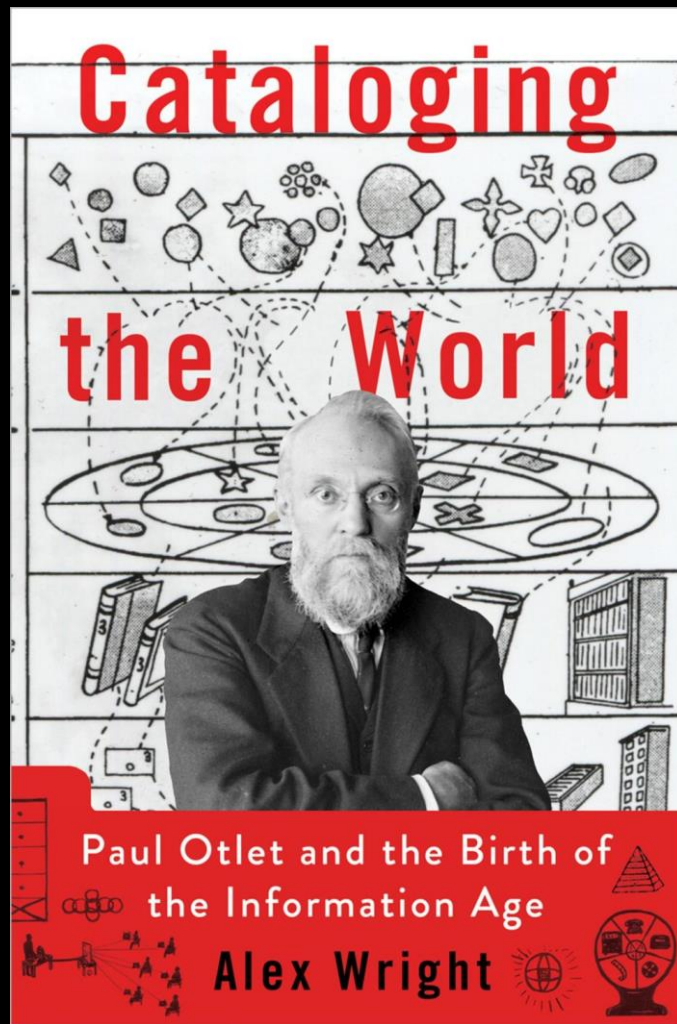
DOCUMENT TRANSMISSE (DOCUMENT GRAPHIQUE)

DOCUMENTATION SOUS FORME (DISQUE OU FILM) TELEPROFITEUR OU RADIO-PROFITEUR.











ORIGIN OF THE LEAGUE OF NATIONS

January 8th, 1918. Fourteen Points laid down by President Wilson as the basis of world peace. (*)

January 25th, 1919. League accepted in principle.

April 28th, 1919. Covenant adopted.

January 10th, 1920. League came into being; Secretariat established in London.



Woodrow WILSON

January 16th, 1920. First meeting of Council at Paris.

November 1st, 1920. League Headquarters moved from London to Geneva.

November 15th, 1920. First Meeting of Assembly at Geneva.

(*) THE FOURTEENTH POINT :

" A General Association of Nations must be formed under specific covenants for the purpose of affording mutual guarantees of political independence and territorial integrity to great and small States alike."



League of Nations Commission of the Peace Conference

Seated (left to right) :

Viscount CHINDA; Baron MAKINO; M. BOURGEOIS; Lord Robert CECIL; M. ORLANDO; M. PESSOA; M. VENIZELOS.

Standing (left to right) :

M. DIAMANDI; M. TCHU WEI; Colonel HOUSE; M. DROWSKI; M. VESNITCH; General SMUTS; President WILSON; M. KRAMAR; M. HYMAN; M. WELLINGTON KOO; M. BATALHA REIS; M. SCIALOJA; M. LARNAUDE.



THE COVENANT

THE HIGH CONTRACTING PARTIES,

In order to promote international co-operation and to achieve international peace and security :
 By the acceptance of obligations not to resort to war;
 By the prescription of open, just and honourable relations between nations;
 By the firm establishment of the understandings of international law as the actual rule of conduct among Governments; and
 By the maintenance of justice and a scrupulous respect for all treaty obligations in the dealings of organised peoples with one another :

Agree to the Covenant of the League of Nations.

STATES MEMBERS



Any fully self-governing State, Dominion or Colony may become a Member of the League on a two-thirds vote of the Assembly.

THE FIFTY-FOUR MEMBERS OF THE LEAGUE :

Abyssinia	China	Costamala	Luxemburg	Roumania
Albania	Colombia	Haiti	Netherlands	Salvador
Argentina	Cuba	Honduras	New Zealand	Kingdom of the Serbs,
Australia	Czechoslovakia	Hungary	Nicaragua	Croats and Slovenes
Austria	Denmark	India	Norway	Siam
Belgium	Dominican Republic	Irish Free State	Panama	South Africa
Bolivia	Ethiopia	Italy	Paraguay	Spain
British Empire	Finland	Japan	Persia	Sweden
Bulgaria	France	Latvia	Peru	Switzerland
Canada	Germany	Liberia	Poland	Uruguay
Chile	Greece	Lithuania	Portugal	Venezuela

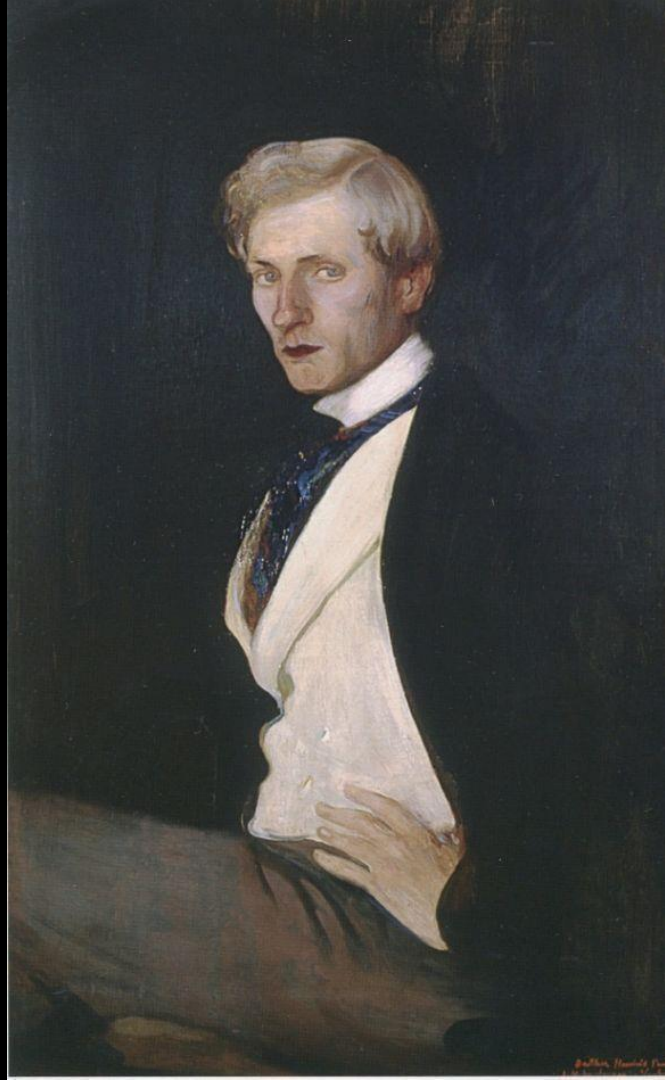
NON-MEMBERS :

Afghanistan	Costa Rica **	Egypt	Mexico	Turkey
Brazil *	Ecuador	Hedjaz	U. S. S. R.	United States of America

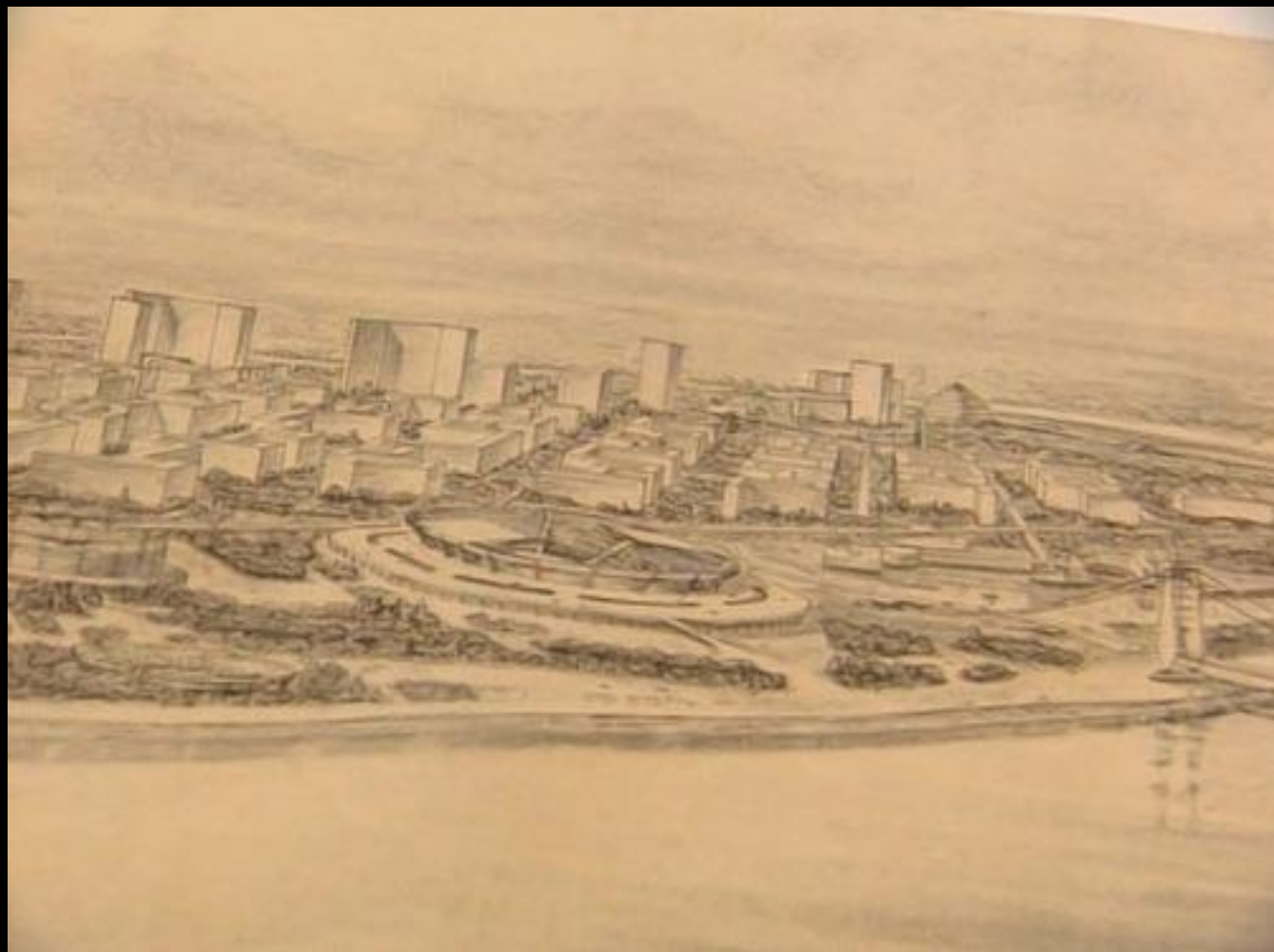
* Withdrew from the League on June 12th, 1928.

** " " " " January 21st, 1927.















Inter-Galactic Network











Separatum

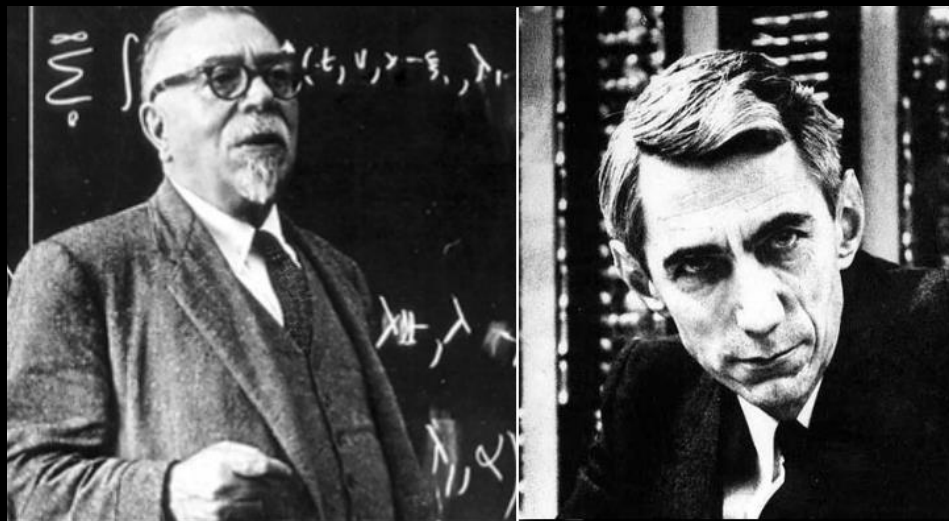
EXPERIENTIA VOL. VII/4, 1951 - p. 128

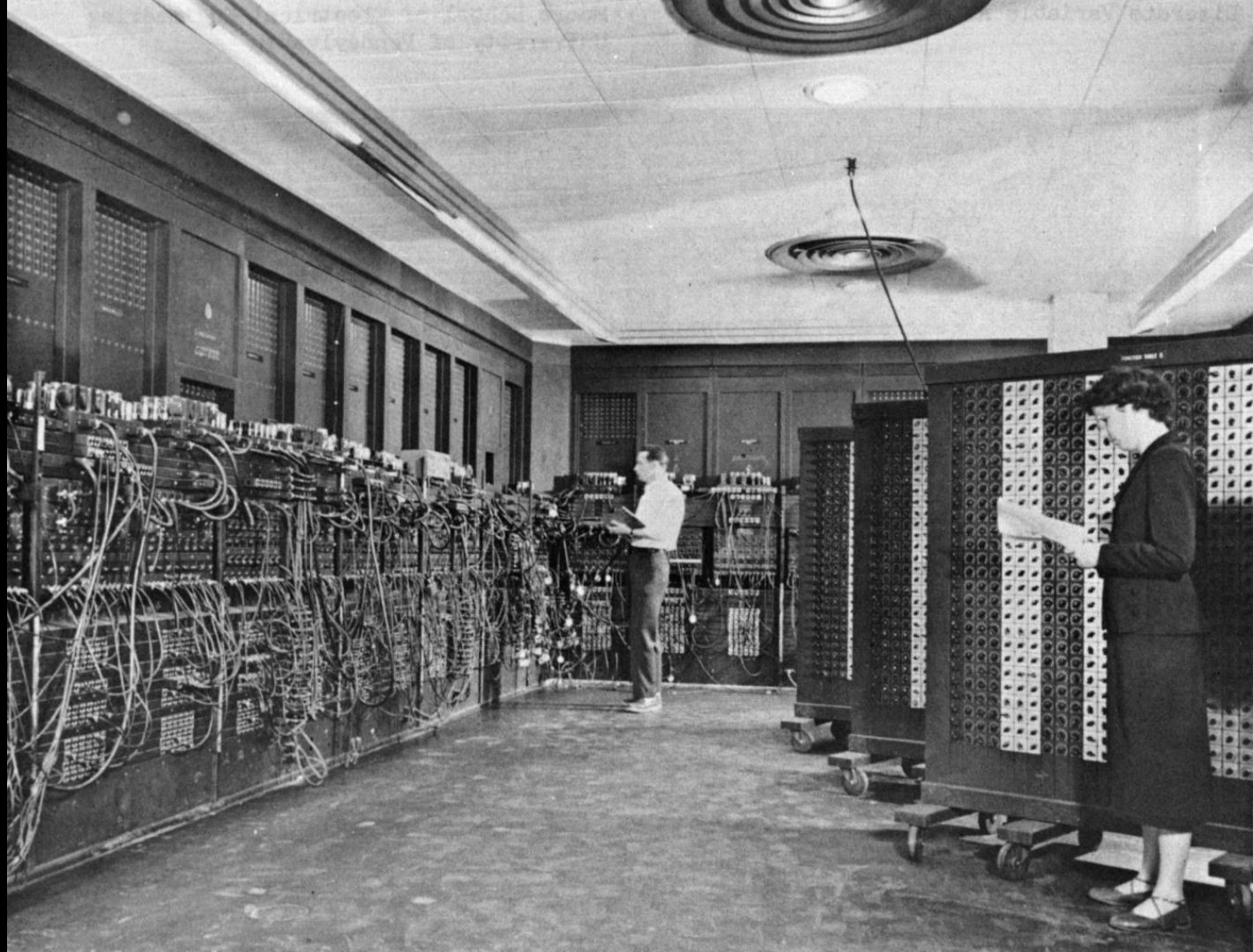
BIRKHÄUSER PUBLISHERS, BASEL/SWITZERLAND

~~EXPERIENTIA~~
B Delft

A Duplex Theory of Pitch Perception¹

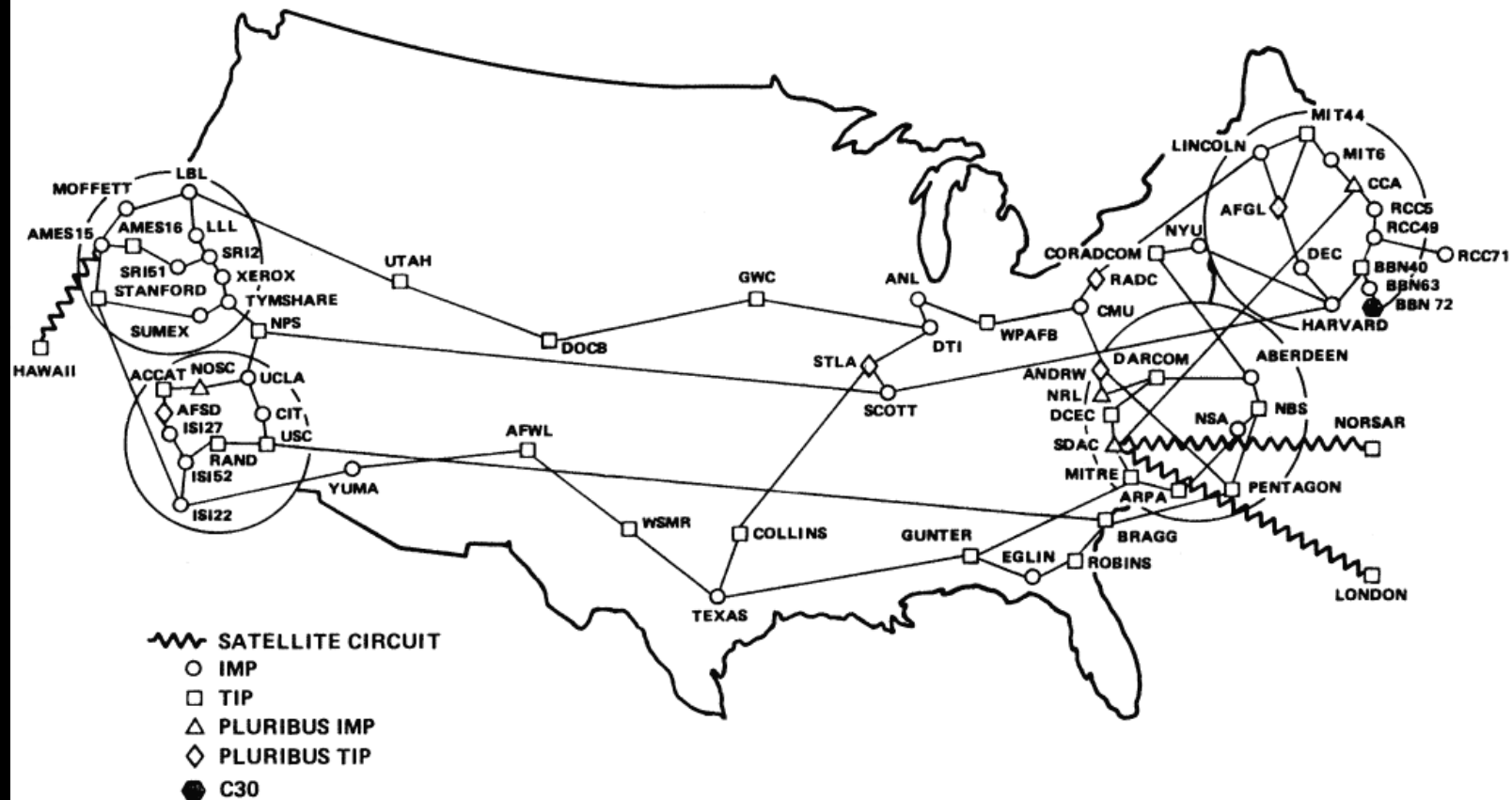
By J. C. R. LICKLIDER², Cambridge, Mass.







ARPANET GEOGRAPHIC MAP, OCTOBER 1980



(NOTE: THIS MAP DOES NOT SHOW ARPA'S EXPERIMENTAL SATELLITE CONNECTIONS)
 NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

ADVANCED RESEARCH PROJECTS AGENCY

Washington 25, D.C. April 23, 1963

MEMORANDUM FOR: Members and Affiliates of the Intergalactic
Computer Network

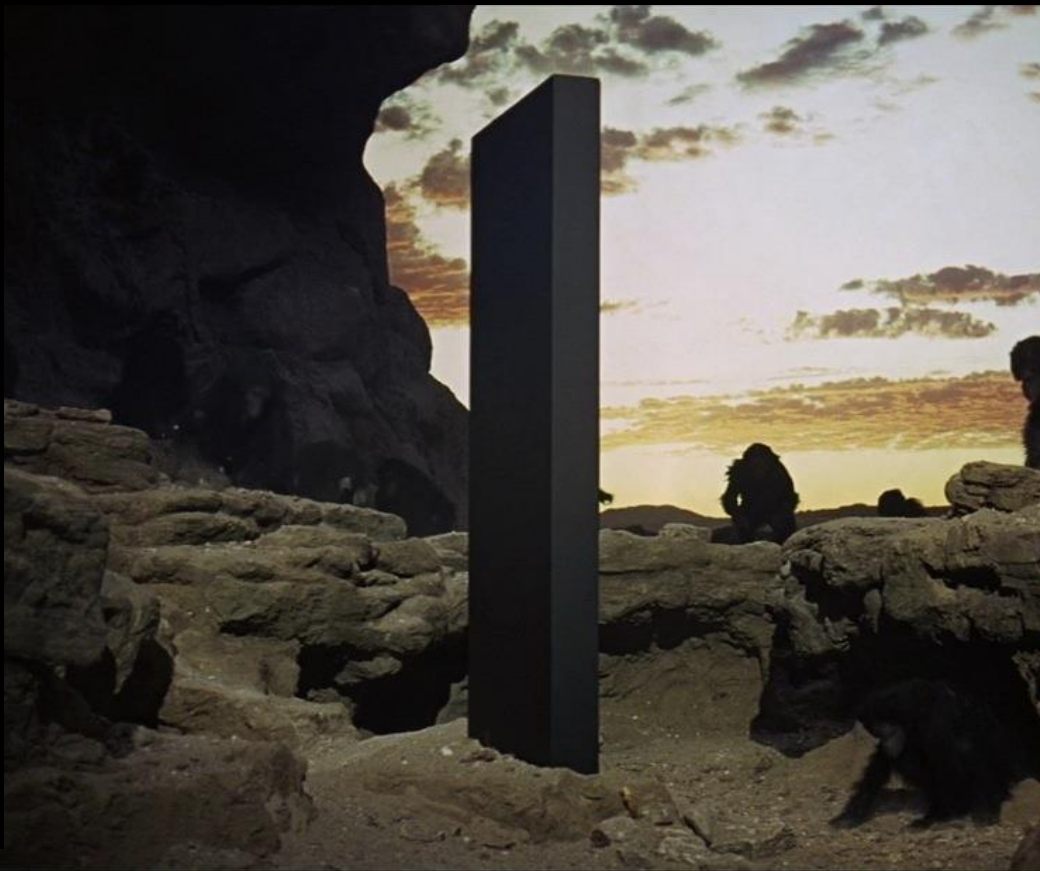
FROM: J. C. R. Licklider

SUBJECT: Topics for Discussion at the Forthcoming Meeting

First, I apologize humbly for having to postpone the meeting scheduled for 3 May 1963 in Palo Alto. The ARPA Command & Control Research office has just been assigned a new task that must be activated immediately, and I must devote the whole of the coming week to it. The priority is externally enforced. I am extremely sorry to inconvenience those of you who have made plans for May 3rd. Inasmuch as I shall be in Cambridge the rest of this week, I am asking my colleagues here to re-schedule the meeting, with May 10th, Palo Alto, as target time and place.

The need for the meeting and the purpose of the meeting are things that I feel intuitively, not things that I perceive





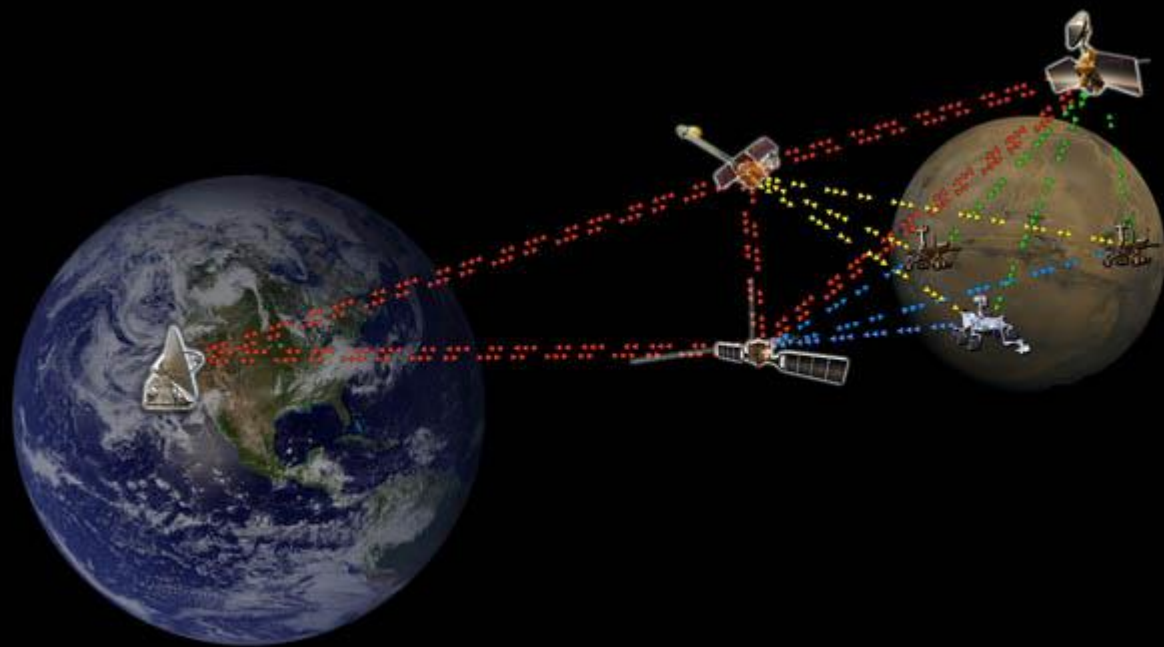
Network Working Group
Request for Comments: 5325
Category: Informational

S. Burleigh
NASA/Jet Propulsion Laboratory
M. Ramadas
ISTRAC, ISRO
S. Farrell
Trinity College Dublin
September 2008

Licklider Transmission Protocol - Motivation

Status of This Memo

This memo defines an Experimental Protocol for the Internet





The Consultative Committee for Space Data Systems





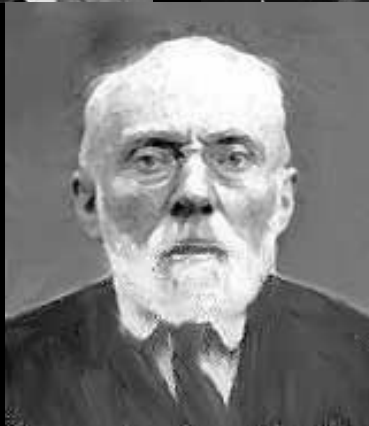
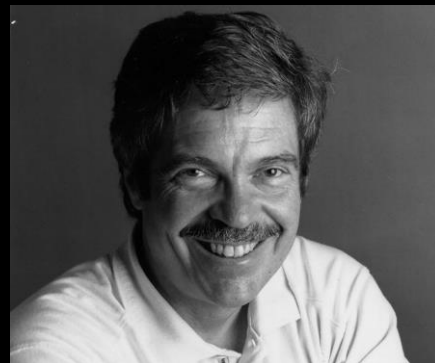




The Inlook Room







Revisiting Geddes' Outlook Tower

The Information Age, 100 years on.

<http://g.mamund.com/2014-apidays-paris>

Mike Amundsen
API Academy, CA Technologies
@mamund

