

# Elective Course Information Architecture

## History of Information Architecture

Prof Dr Gerhard Schmitt

March 8, 2010



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# Overview

- Information Architecture Types
  - Technology Milestones
  - From Card Boxes to Online Collaboration
  - From Information to Knowledge
  - organise. optimise. simplify.
- New Methods in the Architectural Design Process



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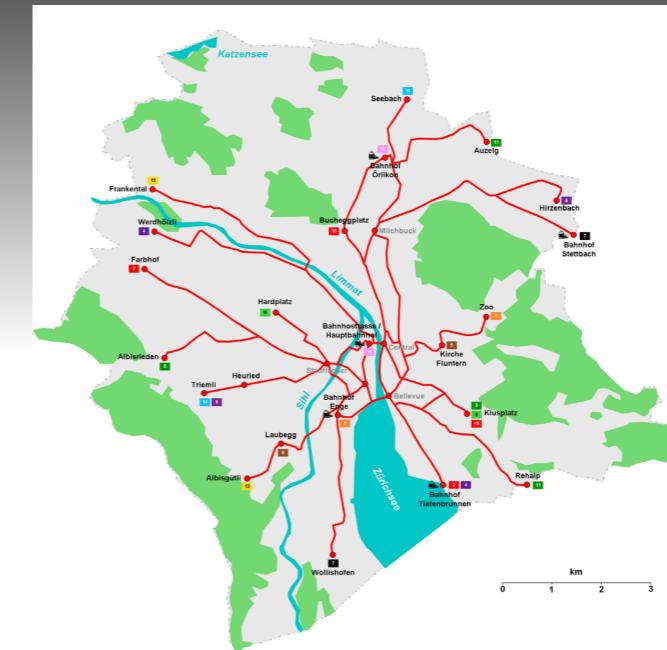
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# Andreas Kaufmann



## INFORMATION Architecture:

Die Informationen, wo die Trame in Zürich halten, sind visuell dargestellt. Die Informationen sind in einer 2D-Ebene zueinander in Beziehung gesetzt. Man könnte das ein architektonisches Beziehungssystem nennen.



## Information ARCHITECTURE:

Physische Architektur wird durch reine Information überformt. Das Gebäude gewinnt eine neue Bedeutung. Es wird zum Informationsträger.



#### INFORMATION architecture

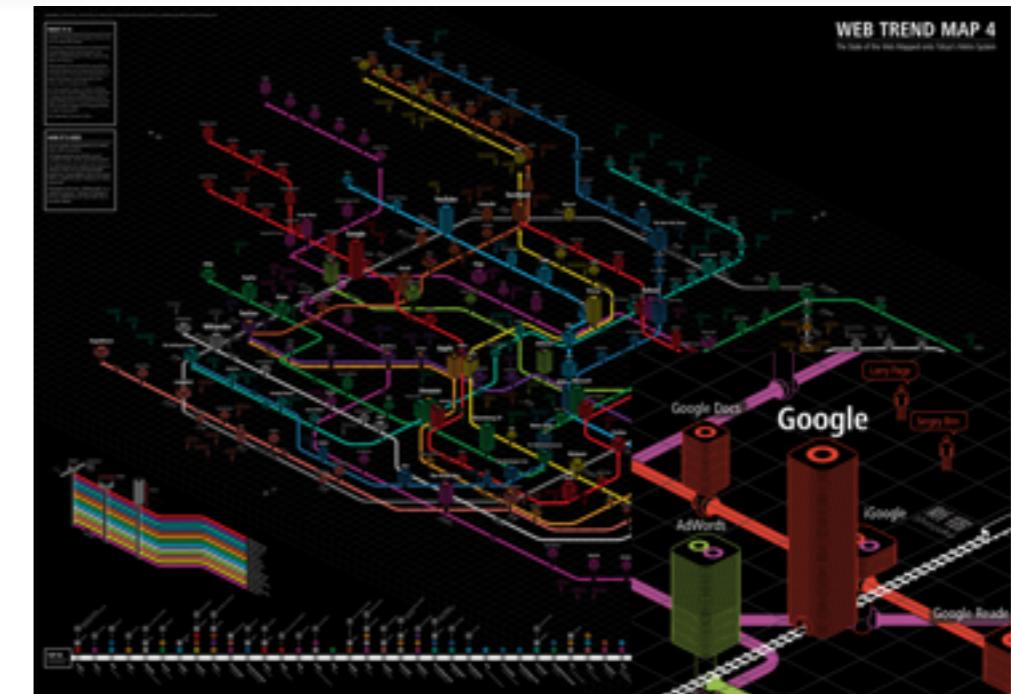
This image from the Eyebeam project from D+R+(R) represents the INFORMATION architecture, as it uses the actual development of activities that are happening in the building to transmit them as art, with technological support. Even when this media centre is a place for representation of art as production, both of them have different speed of development, and the people who visit the place becomes part of the art transformation process without even noticing it. The people become part of the INFORMATION that is transmitted inside the building, the visitor as the producer uses the architecture, but not create a physical space, to show the results of the information they gather, through visitor and creative process.

# Alste Plentalte



Here is an image of Information ARCHITECTURE which I have found. I understand under this term computer based visualising of architecture and 3D modelling, which involves programming language. The image was found in [www.procedural.com](http://www.procedural.com) and was made with a Programme City Engine, which allows making model of 3d buildings by using simple scripting language and rules.

# Nicolas Rothenbühler

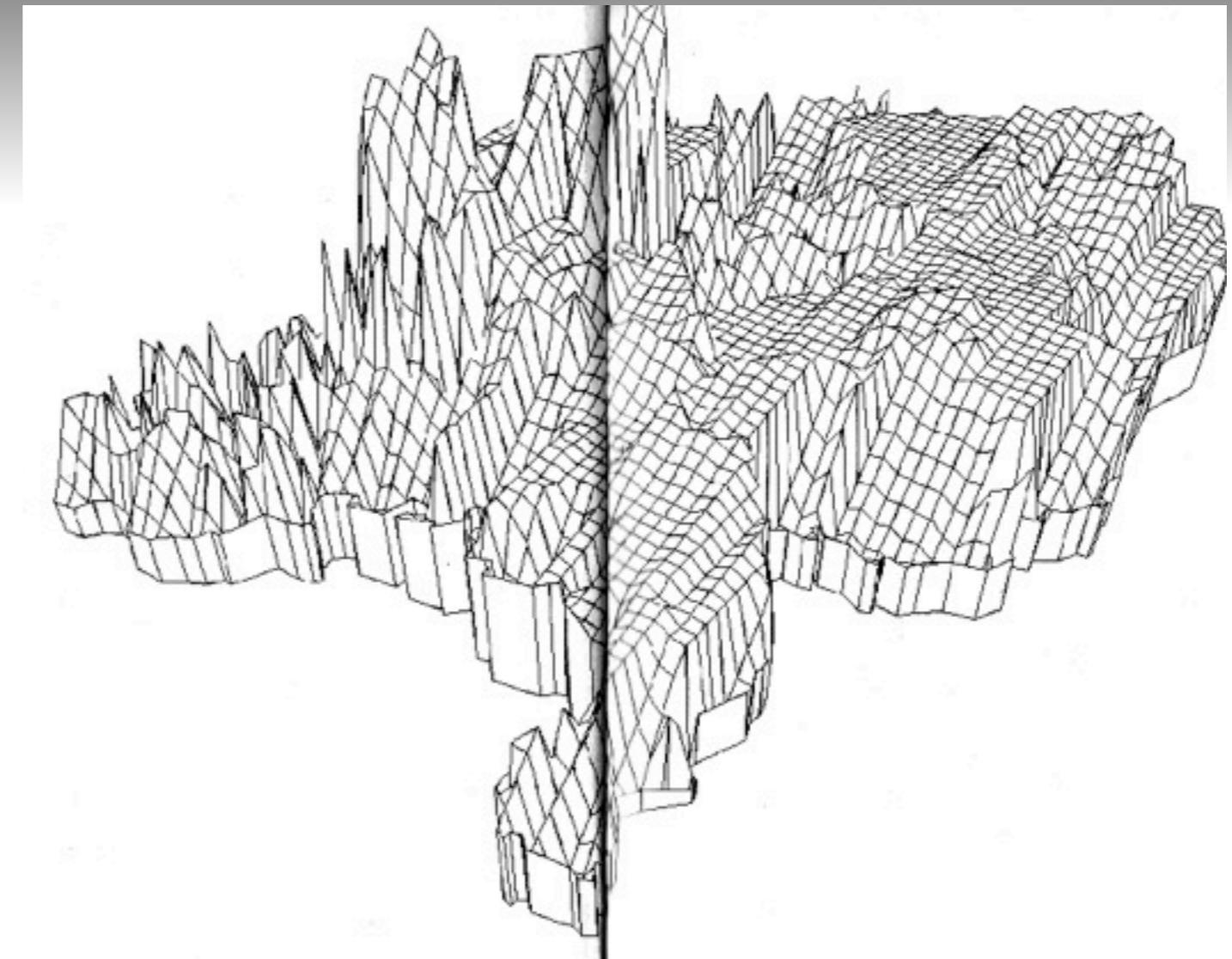


Hier meine beiden Vorschläge zu den Begriffen: Second Life für information ARCHITECTURE, das andere Bild für INFORMATION architecture, es ist eine Übertragung der wichtigsten Internet Domains auf das tokyoter Metrosystem nach dem Kriterium der Benutzer und Klicks (Google = Shibuya)



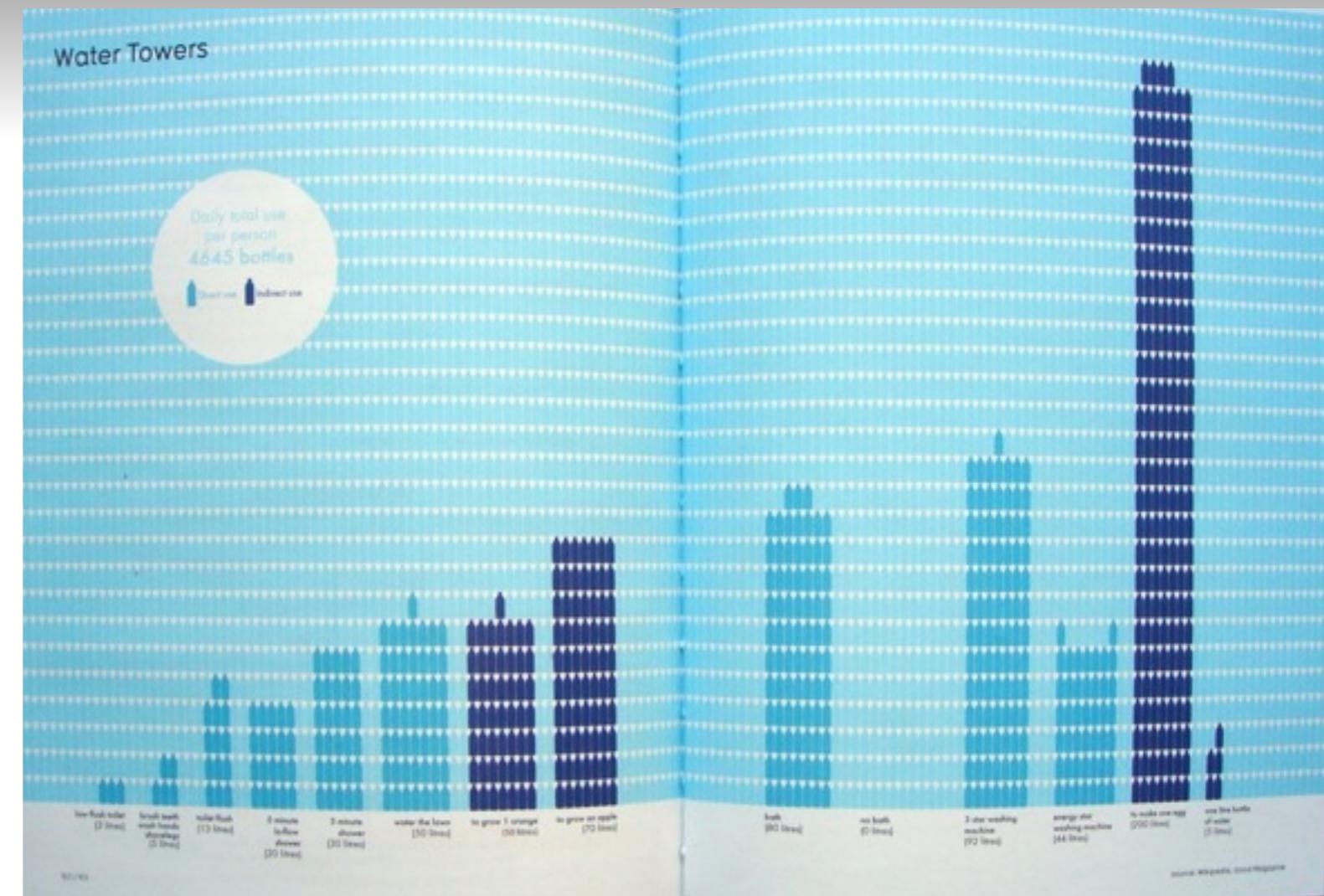
Das Institut du Monde Arabe, 1987, in Paris verfügt über verschiedene große Blenden an den quadratischen Fenstern. Sie steuern mittels Fotovoltaik den Lichteinfall und verändern so die Fassade des Gebäudes. Information bestimmt die Architektur : Information ARCHITECTURE

# Christian Aguayo



Das Bild ist Information Architecture weil es zeigt mit ein klarer Diagramm die dichte in Holland. Es ein Beispiel von das Buch "Farmax" von MVRDV (Winy Maas). Sie arbeiten viel mit Inforamation Architecture. Das Bild zeigt mit klarer Linien die Karte von Holland, und wo höher ist gibt's am meisten Leute. Holland hat die grösste dichte der Welt mit 350 Pers pro quadrat km.

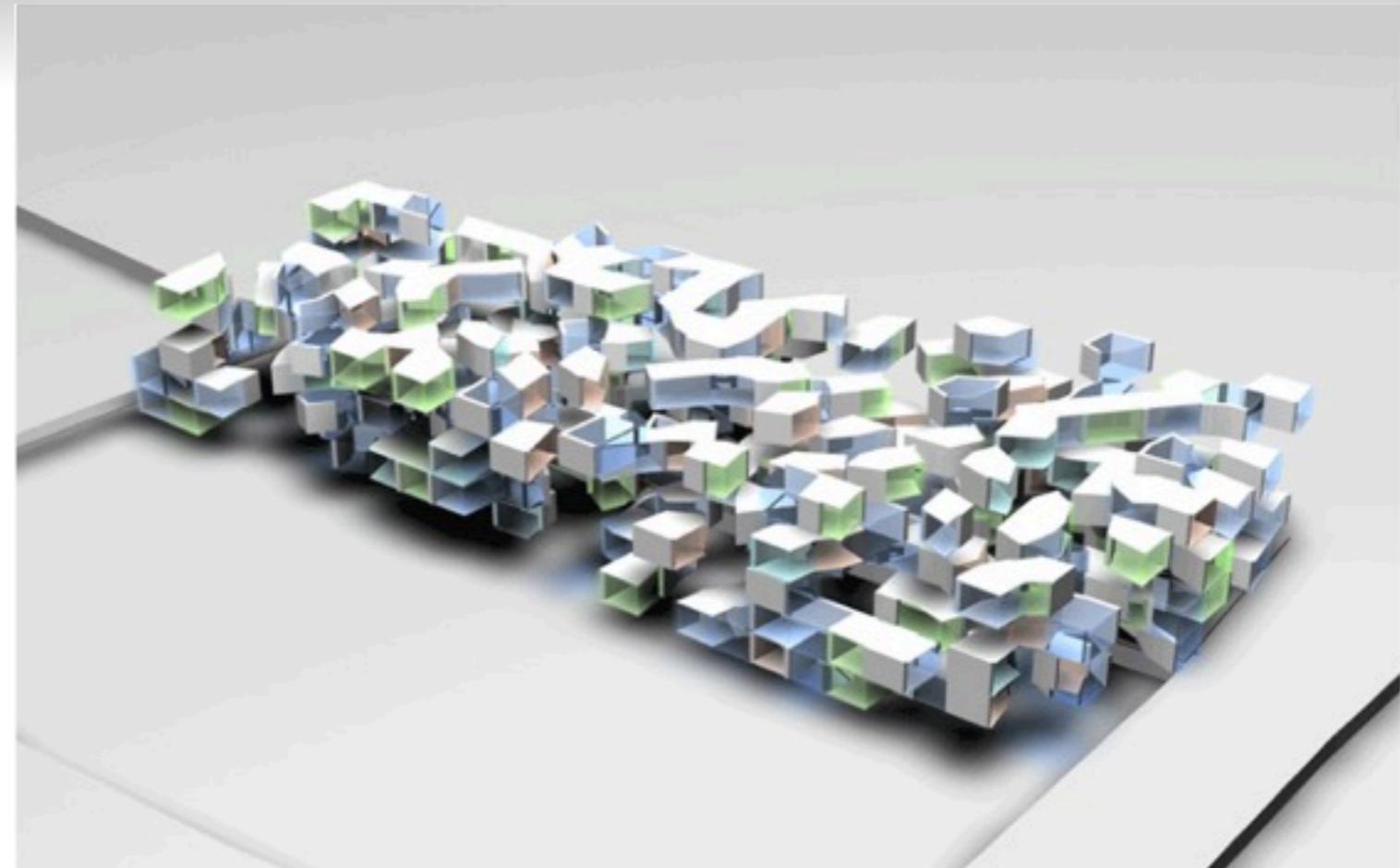
# Roderick Trompert



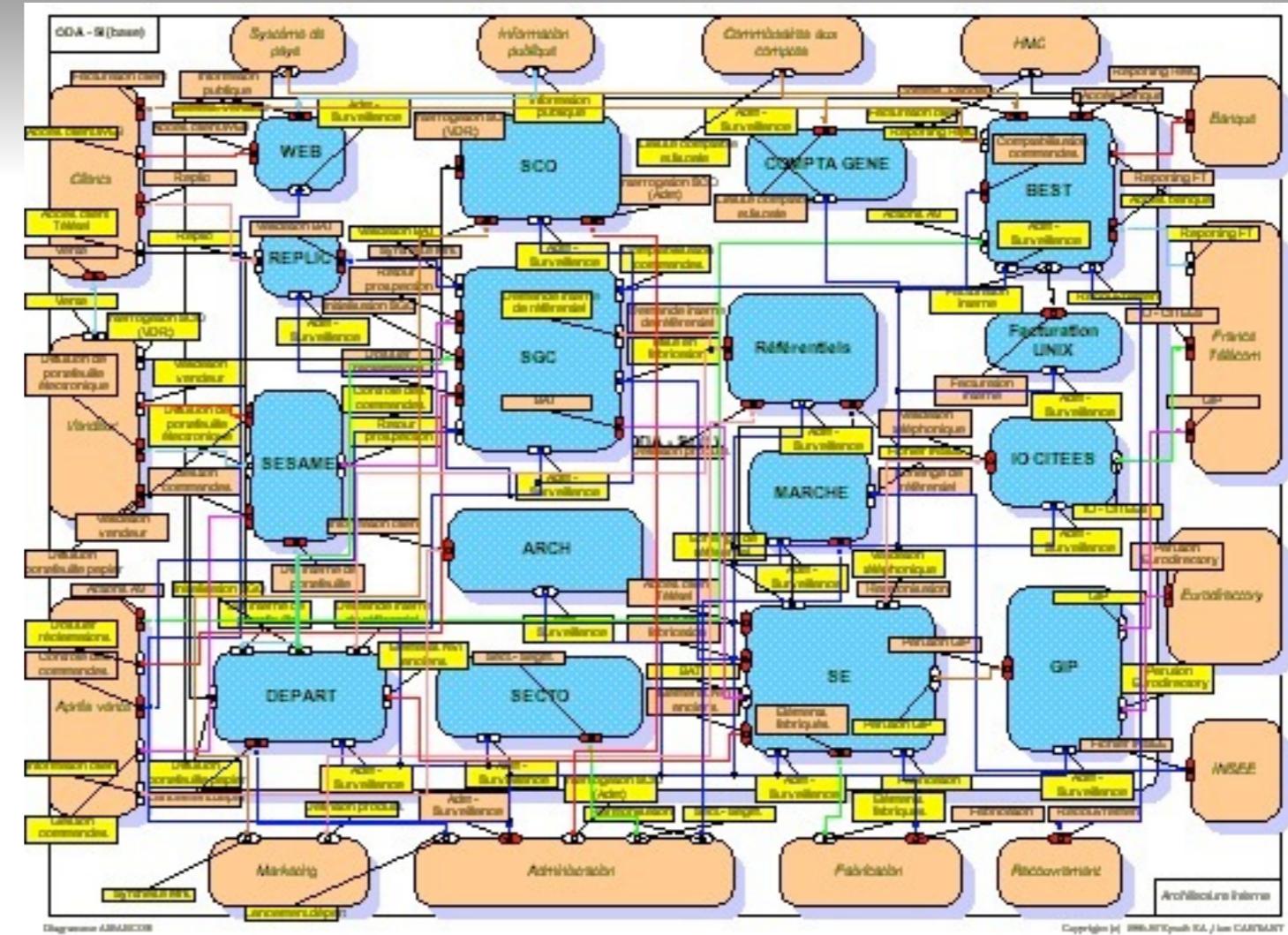
In the attachment I submitted a page from the book 'Information is Beautiful' by David McCandless. This book is all about visual representation of sets of data and facts in such a way that they become clear to read and 'beautiful' at the same time. I think architecture is about that as well; implementing sets of parameters in a logical and visually pleasing way. I chose this particular image because I liked the reference to the archetype 'Watertower' to visually represent usage of water. (INFORMATION Architecture)

Student assignment 1 | FS2010

# Nicolas Schwabe



Hier mein Bild "complex system design" zur Vorlesung Information Architecture.



This is a typical INFORMATION Architecture, which explains the structure of the system. The information flow goes through different part of the system. It looks like a virtual architecture, with communicating information among the sub-system.



Hier ein Bild des rekonstruierten Pompeji mit der "procedural city engine". Grundlage der Rekonstruktion sind GIS Daten, archäologische Informationen, Bevölkerungsdichten, Landnutzung, Strassennetzwerk usw.

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# Lukas Hüsser

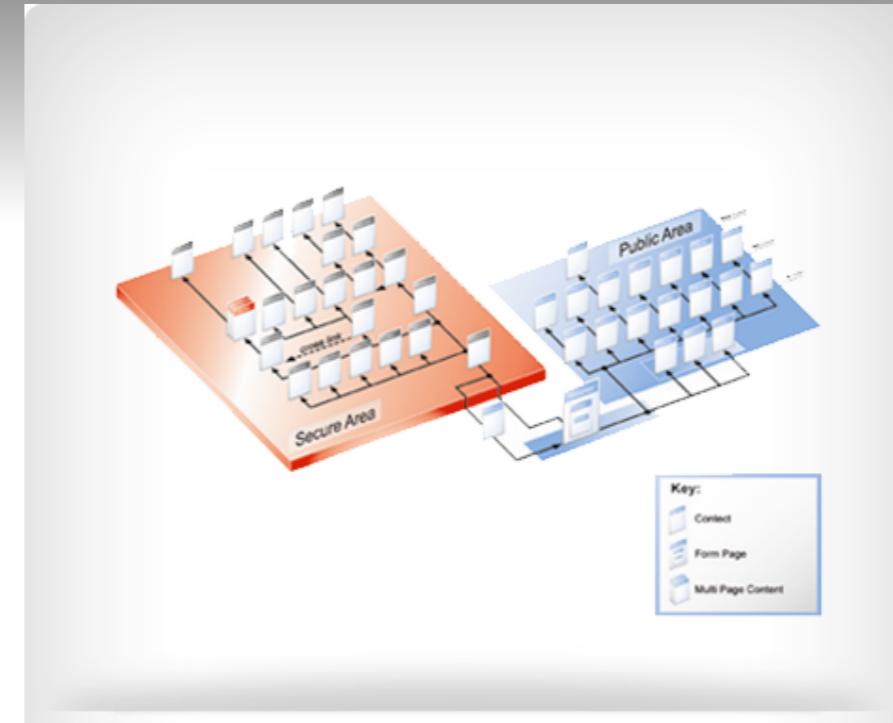


Das ist information ARCHITECTURE, jedenfalls ein Modell davon.  
Die physische Gestalt ist direkt aufgrund von Informationen  
(Soundwellen, Amplituden) umgesetzt.

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## INFORMATION Architecture



## Information ARCHITECTURE



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# Nathalie Bodarwé

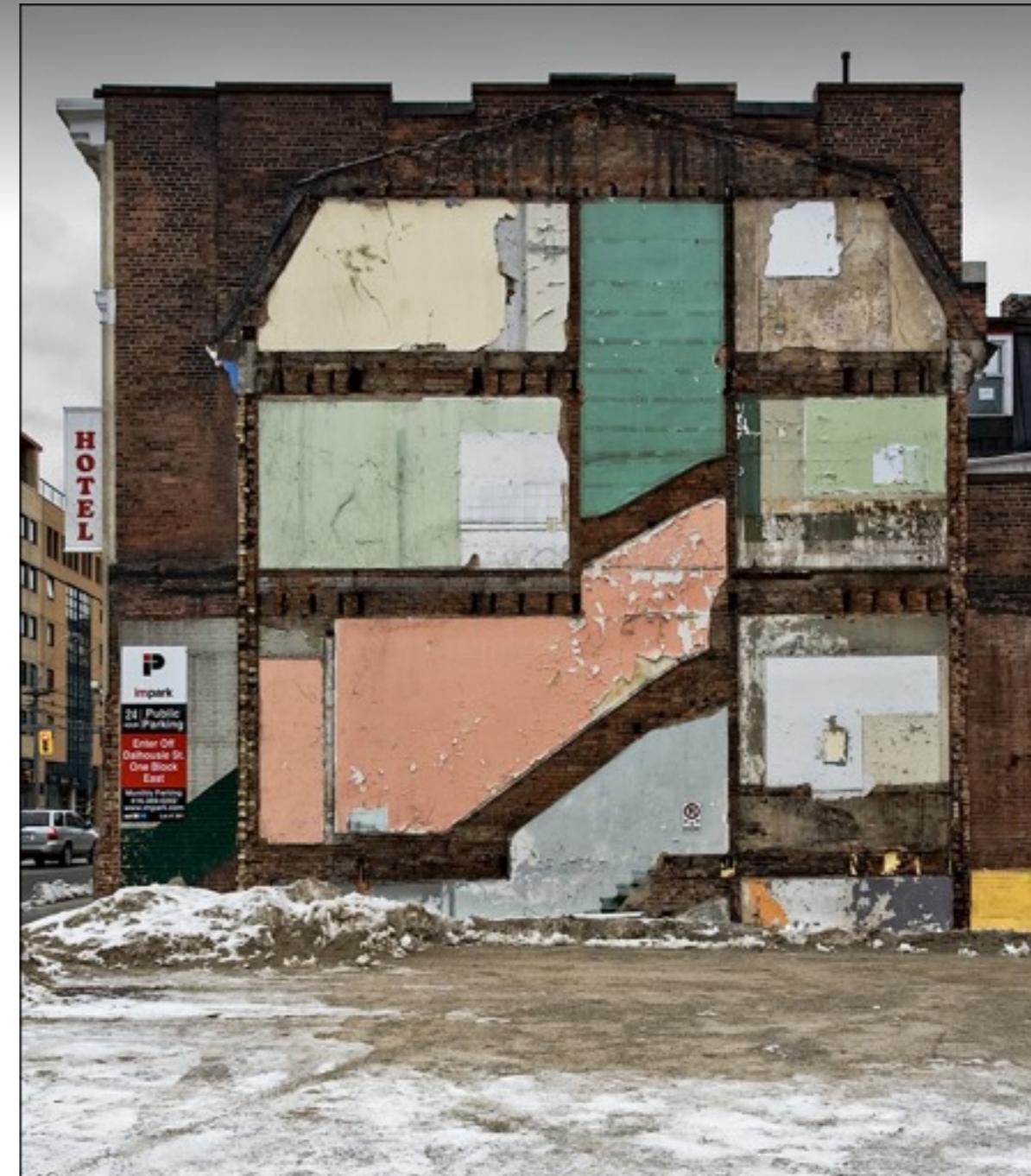


## Information ARCHITECTURE

Diese digitalisierten Bilder, die während des Lichterfestes in Lyon aufgenommen wurden, bestehen auch aus programmierten Informationen die auf architektonisches Material projiziert werden.

Student assignment 1 | FS2010

# Suzanne Coleman



Information ARCHITECTURE  
Rooms from Daily Dose of Imagery

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# Space

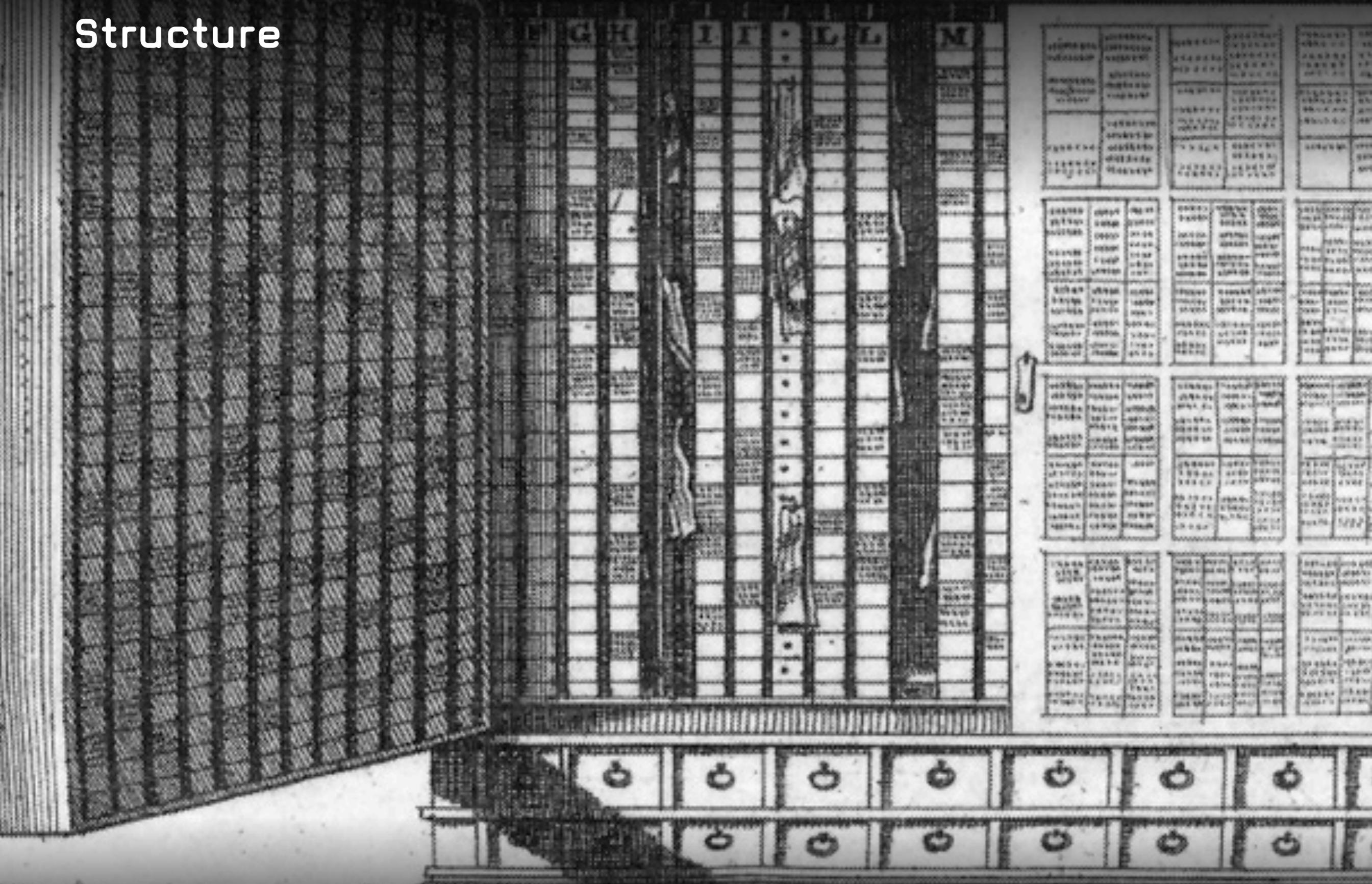
- Library
- Lab
- Science City Infospot

...



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# Structure



Excerpten-Schrank, Gottfried Wilhelm Leibnitz (1646-1716)

# Structure

- Card Box
- Database
- Hypertext
- Semantic Web

...



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Information Architecture Types

# Interface

Büroausstattung, 1920



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Technology Milestones from 1945 until today

## Vannevar Bush 1945

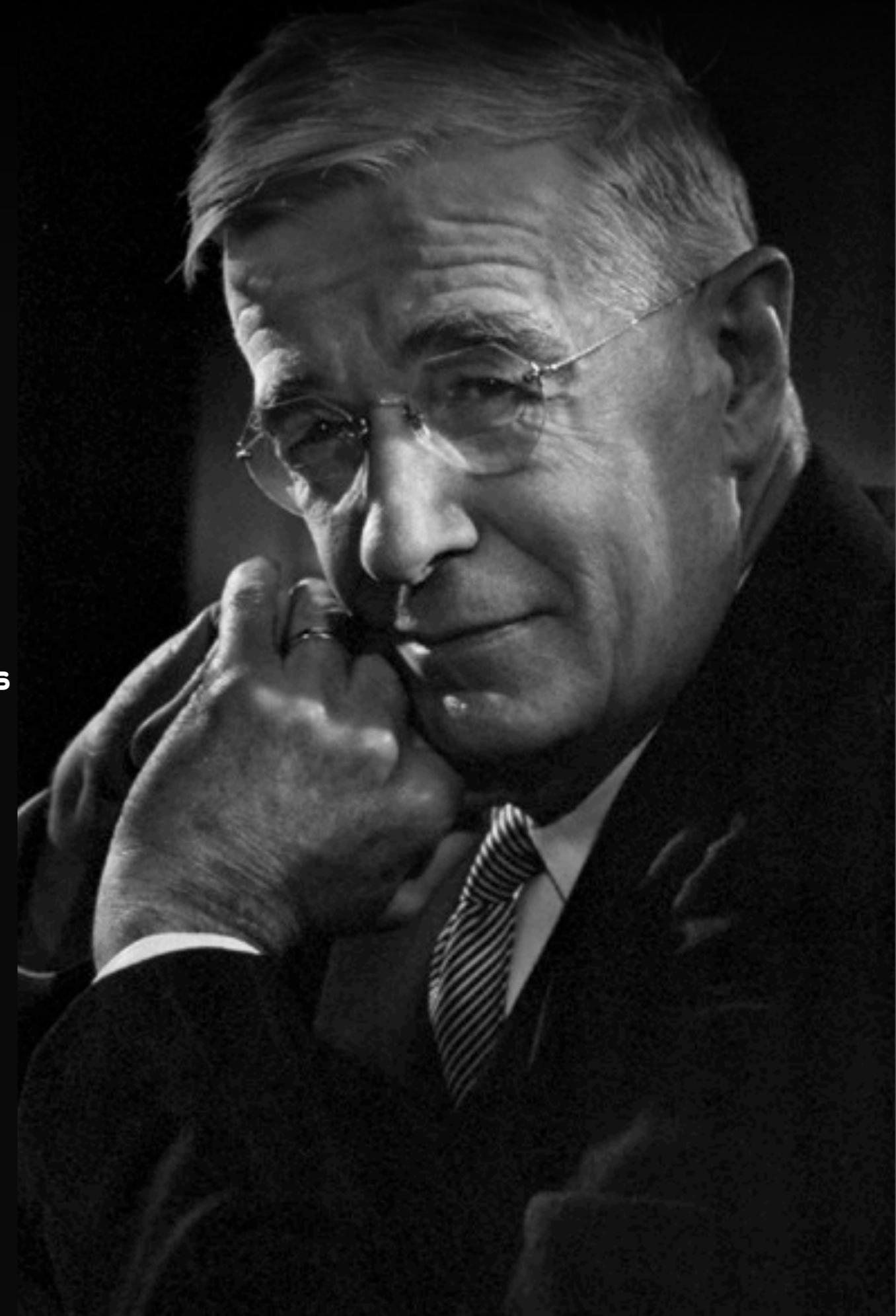
«A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory.

Wholly new forms of encyclopedias will appear, ready made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified.»

Vannevar Bush, As We May Think, 1945

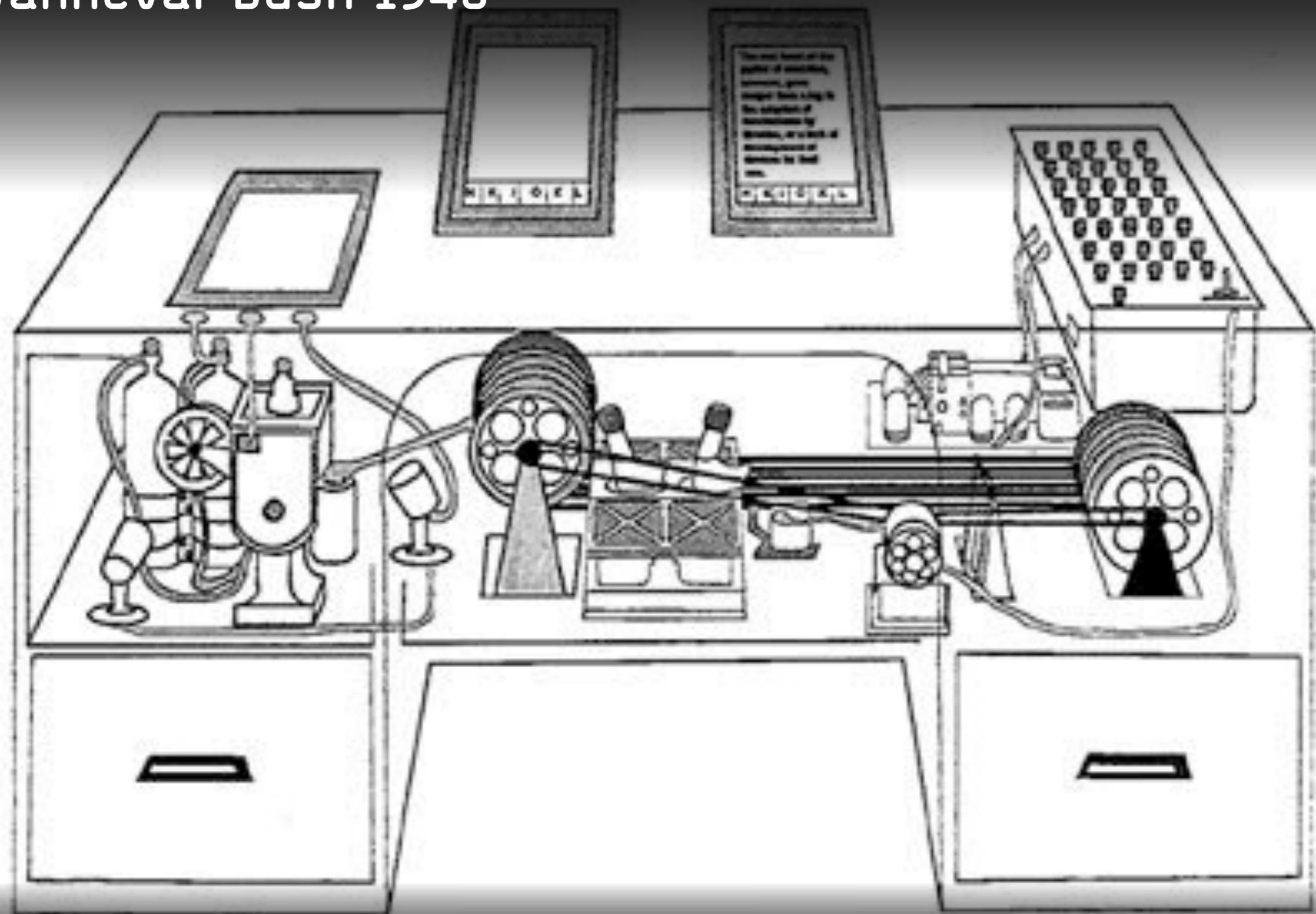


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Technology Milestones from 1945 until today

## Vannevar Bush 1945



Memex, Bush's automated library, 1943

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## J. C. R. Licklider, 1960



«The hope is that, in not too many years, 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.»

Licklider, 1960

Technology Milestones from 1945 until today

## Ivan Sutherland, 1973



Demonstration of the Sketchpad system on the console of the TX-2 at MIT, 1963

Technology Milestones from 1945 until today

## Ted Nelson, 1965

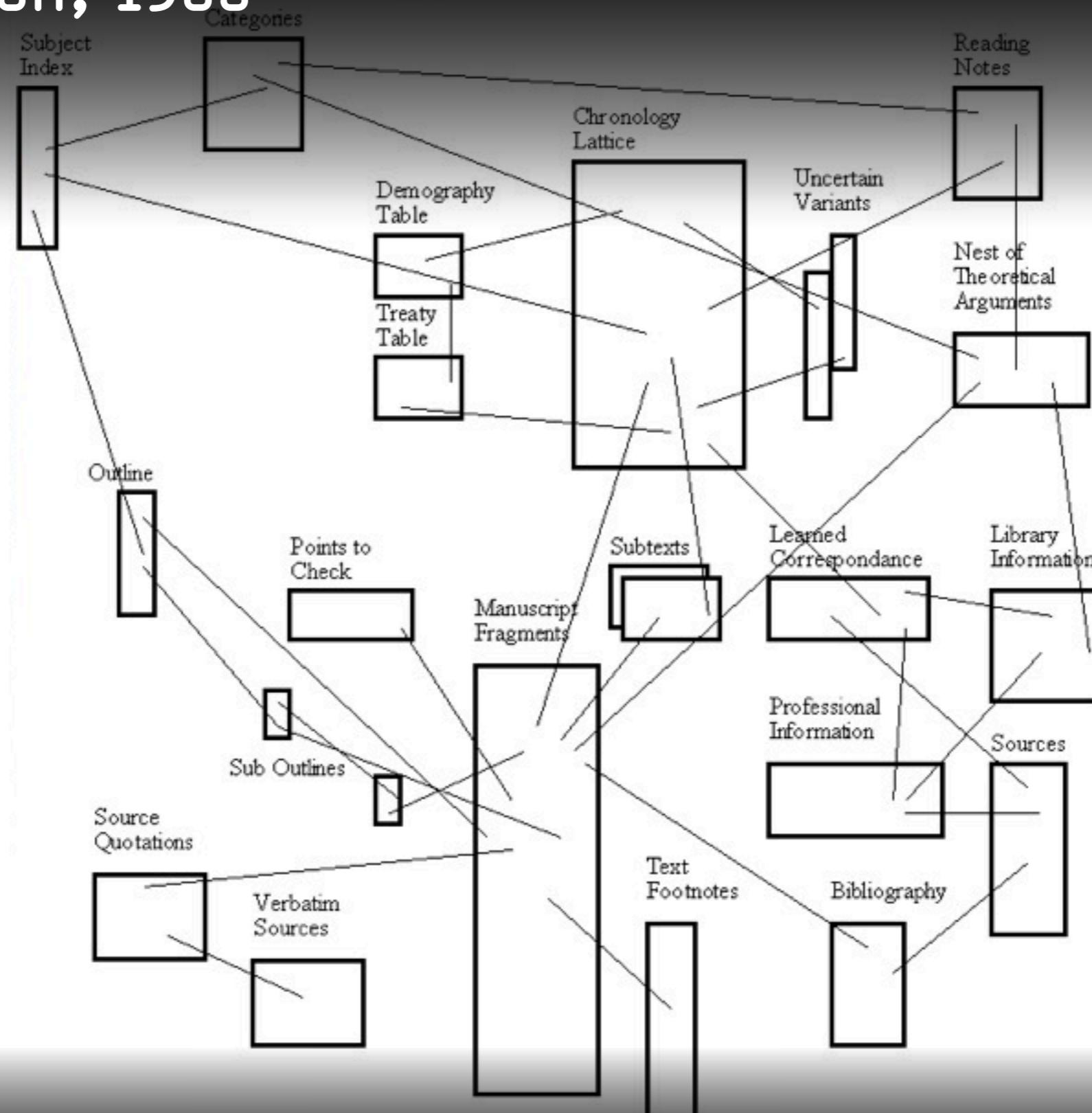


«A user interface should be so simple that a beginner in an emergency can understand it within ten seconds.»

Nelson, 1965

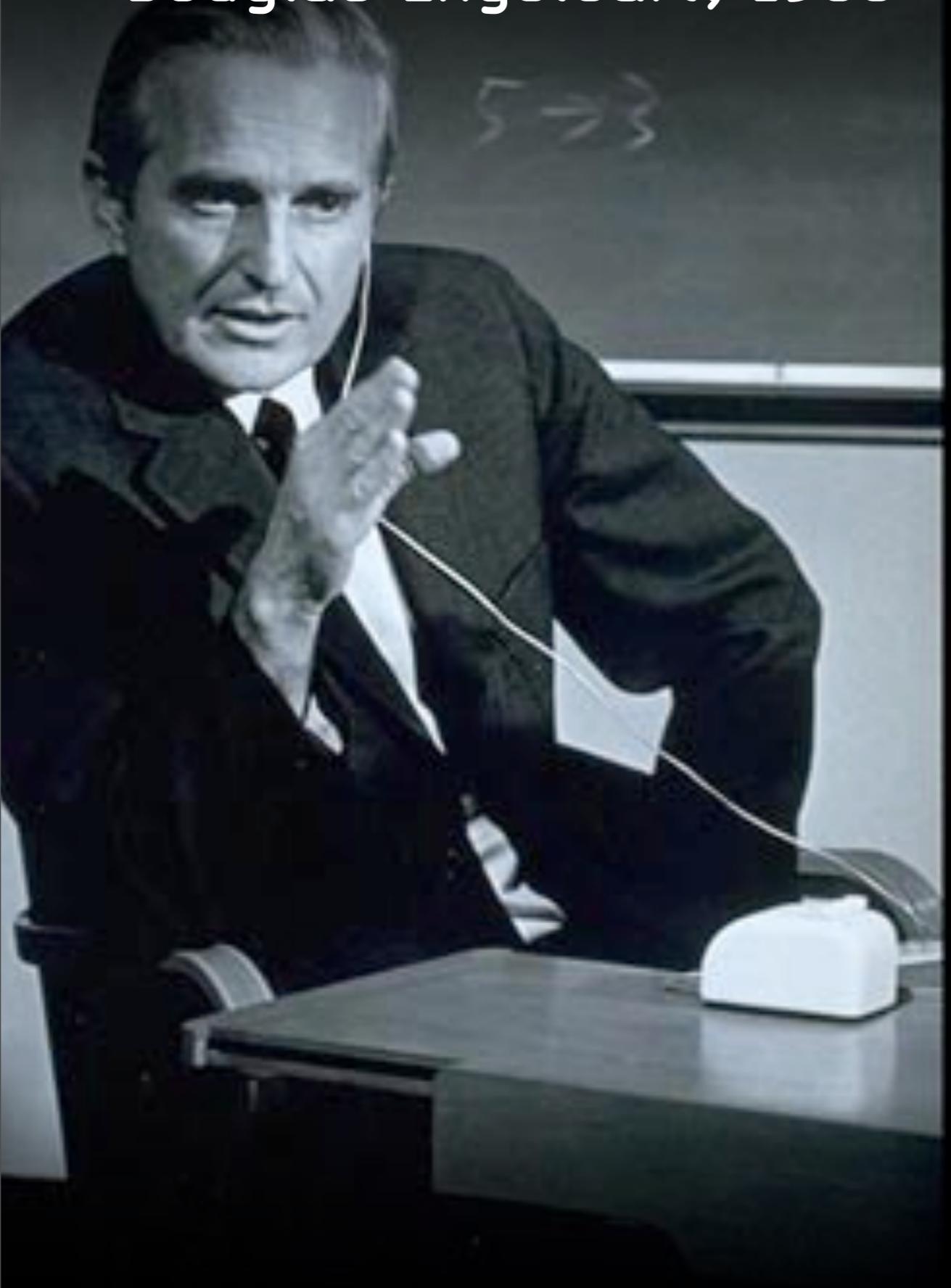
Technology Milestones from 1945 until today

# Ted Nelson, 1965



Technology Milestones from 1945 until today

## Douglas Engelbart, 1968

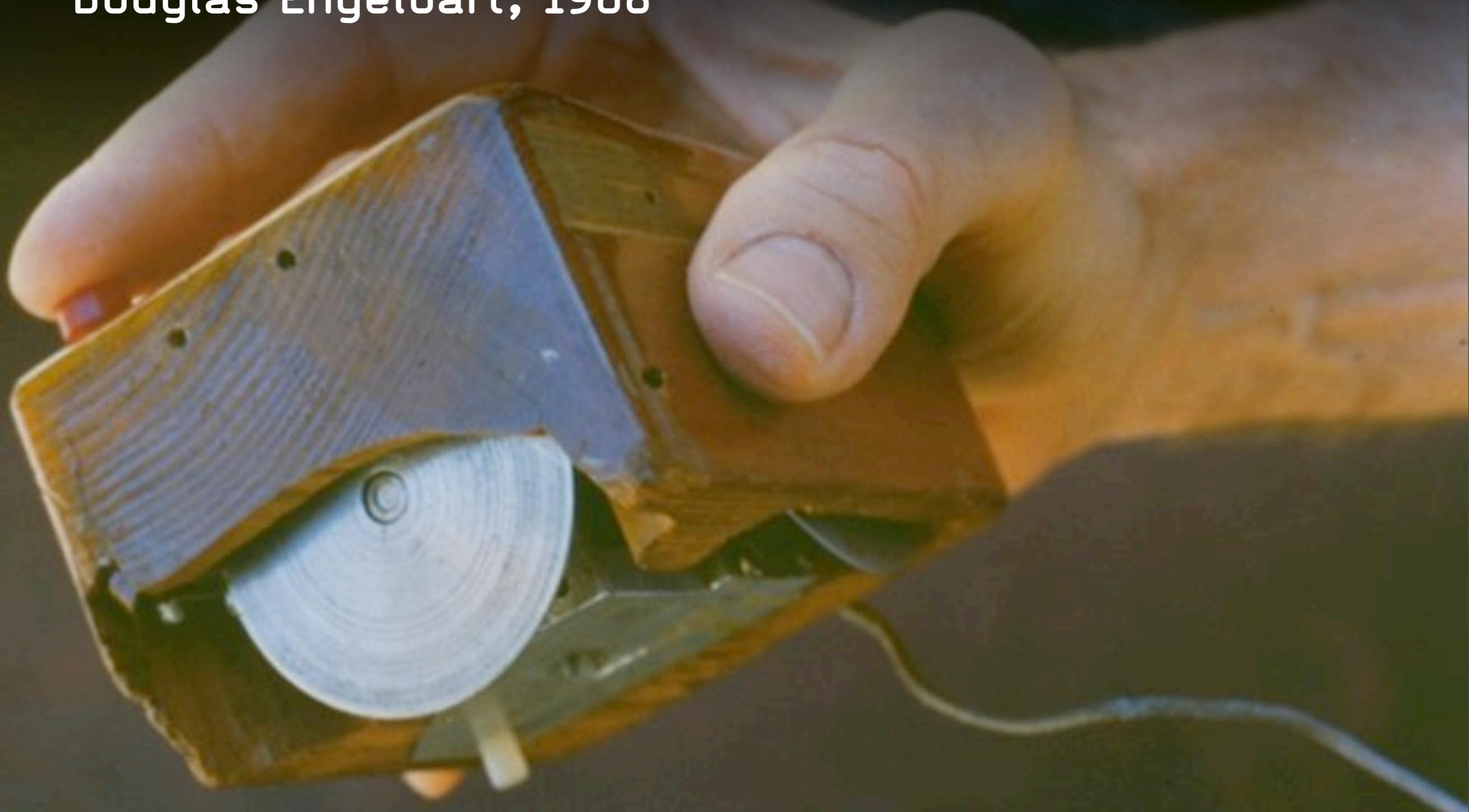


«For an inspiring vision of the future of interactive computing and the invention of key technologies to help realise this vision.»

Engelbart, 1984

Technology Milestones from 1945 until today

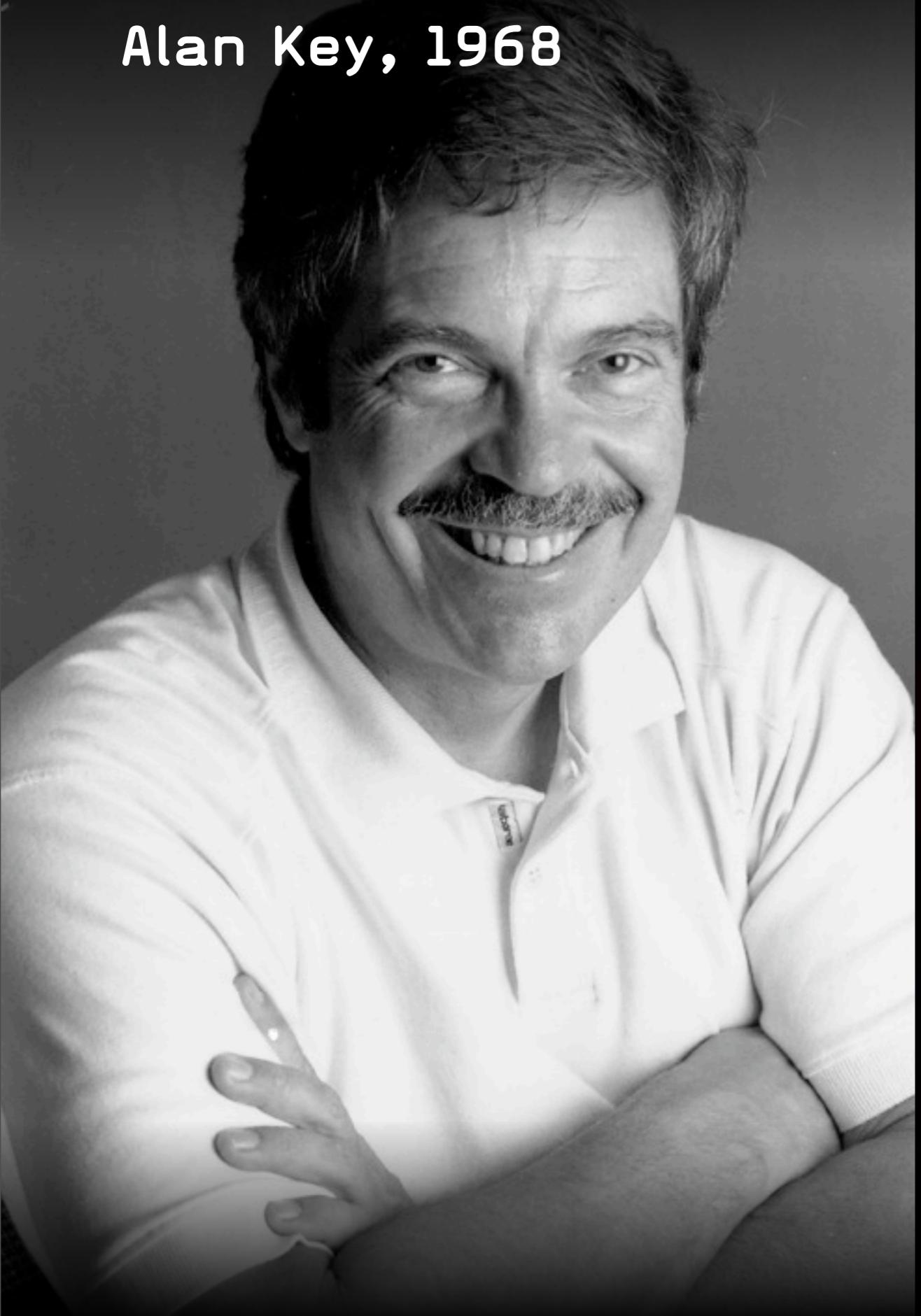
## Douglas Engelbart, 1968



First Mouse

Technology Milestones from 1945 until today

## Alan Key, 1968

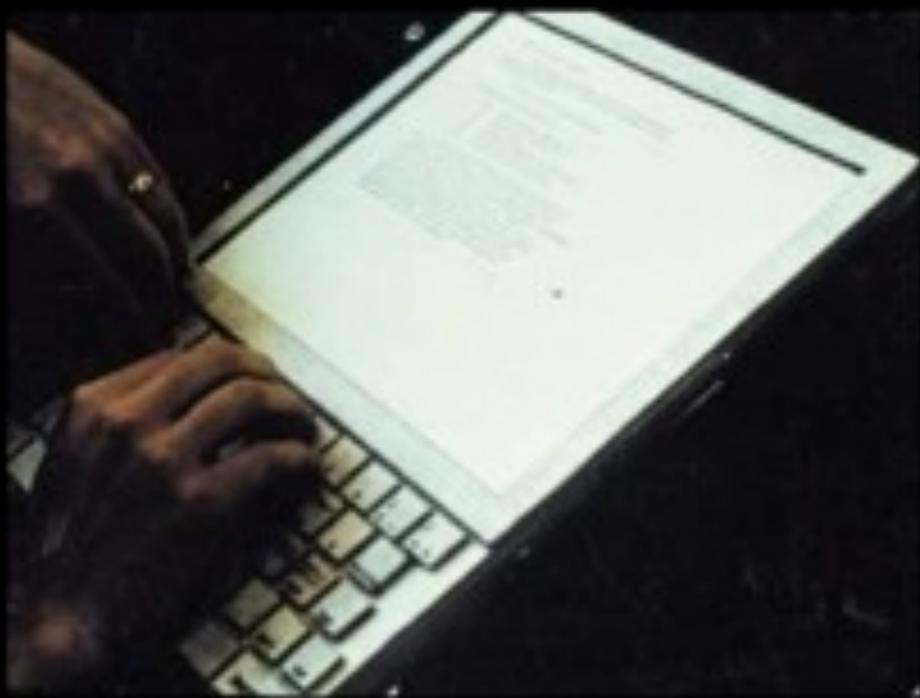


«We wanted the Dynabook to be like the HP calculator except to be a real live computer. This was the inspiration for all that we were thinking about.»

Key, 1968

Technology Milestones from 1945 until today

## Alan Key, 1969



Dynabook

Technology Milestones from 1945 until today

## XEROX Park, 1970



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Technology Milestones from 1945 until today

## XEROX Park, 1970



XEROX Alto, 1973



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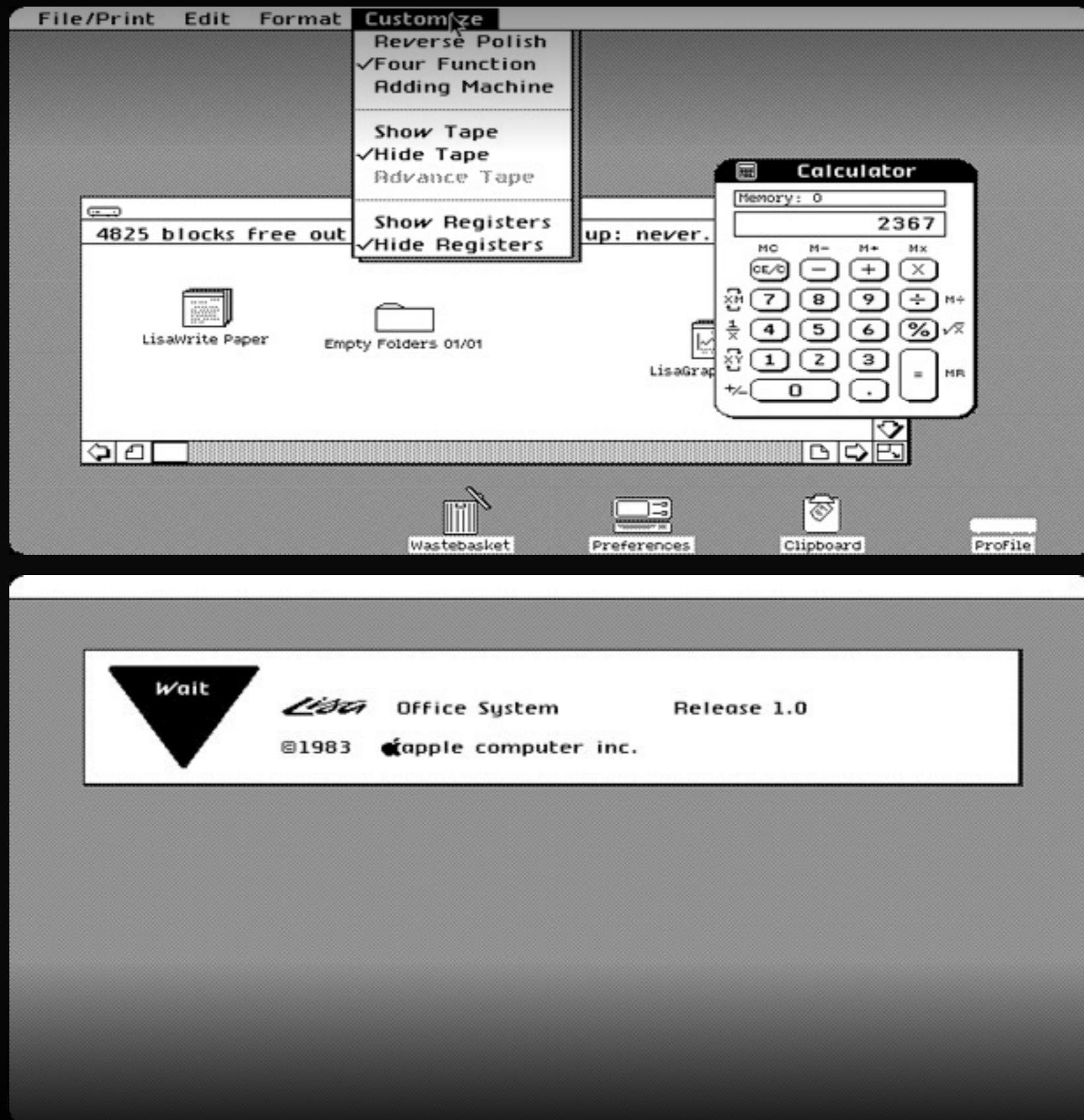
Technology Milestones from 1945 until today

## Apple Lisa, 1983



Technology Milestones from 1945 until today

# Apple Lisa, 1983



## Jef Raskin, 1987

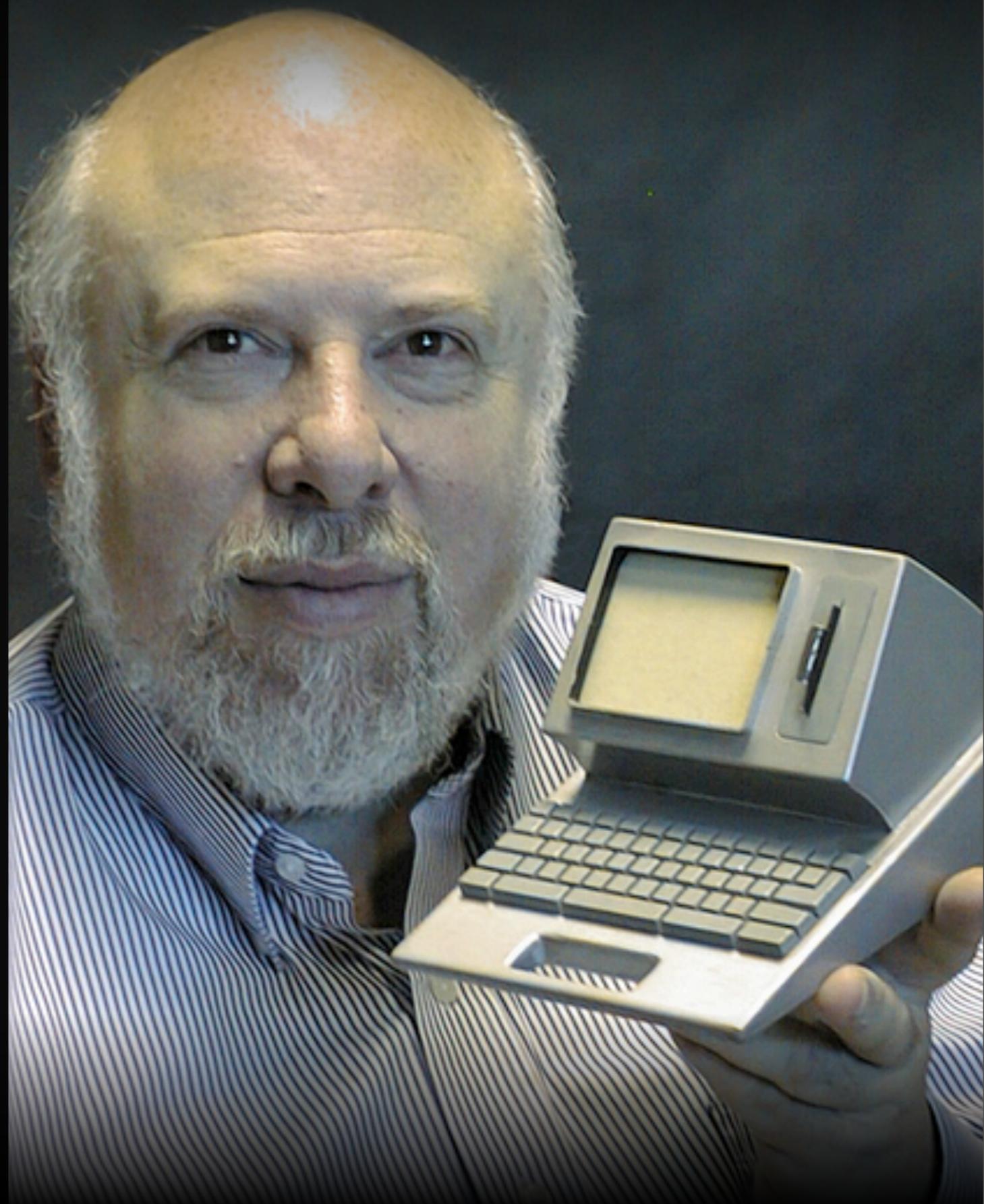
«That quality of a new interface paradigm that is commonly titled "intuitive" may well turn out to be one of the worst qualities it can have.»

Raskin, 1994

XEROX Alto



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Technology Milestones from 1945 until today

## Mark Weiser, 1990



«The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.»

Weiser, The computer of the 21st century,  
1991

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From Card Boxes to Online Collaboration

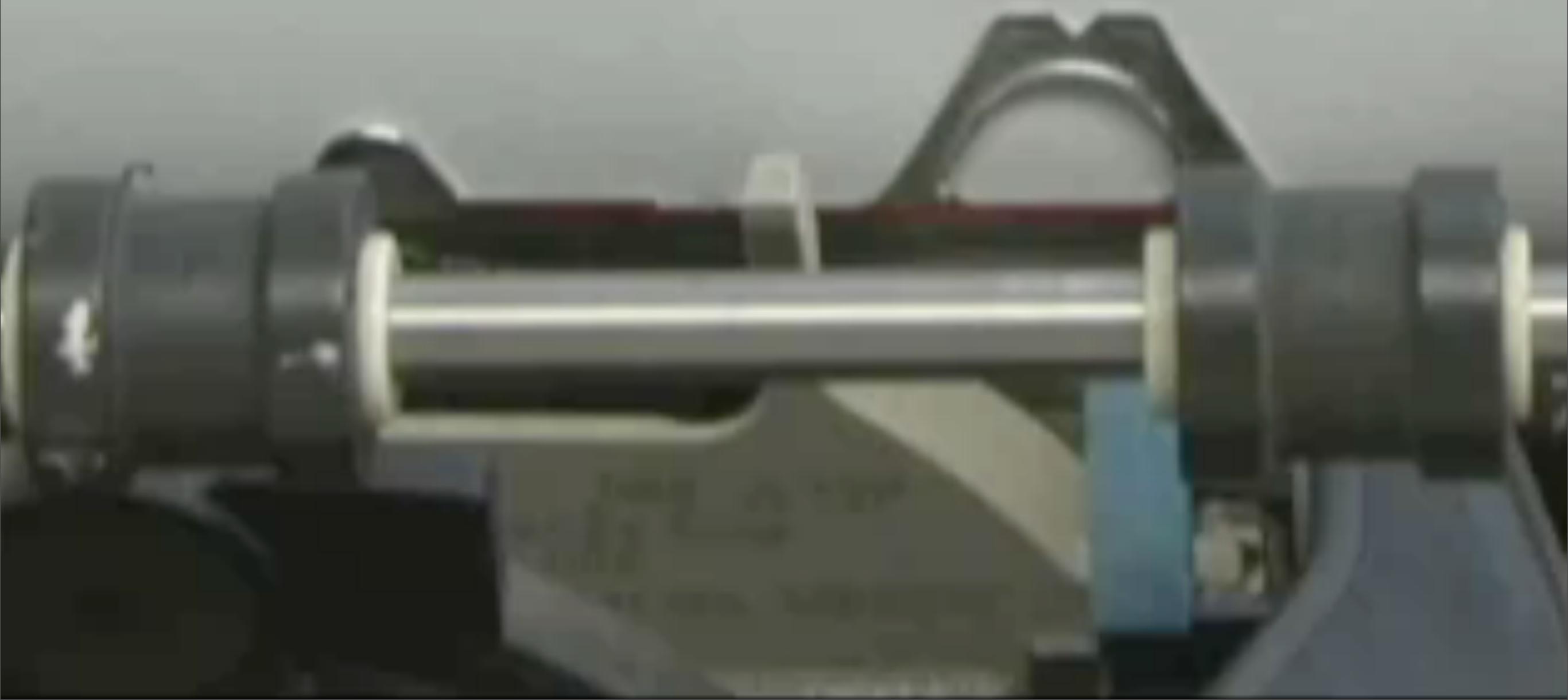
# Information r/Evolution



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From Card Boxes to Online Collaboration

# Information r/Evolution



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## Situation - Information Overload

**Students forget 90% of what they learn in class within 30 days.**

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Students forget 90% of what they learn in class within 30 days.

The majority of this forgetting occurs  
within the first few hours after class.

## Situation - Information Overload

People will remember 10%  
of information presented orally  
tested 72 hours after exposure...

## Situation - Information Overload

People will remember 10%  
of information presented orally  
tested 72 hours after exposure...

...add an image and it goes up to 65%!

## Situation - Information Overload

more and more information  
needs to be communicated  
faster and faster  
to more and more stakeholders

## Visualisation Fields - Static

- Art
- Advertising
- Graphic Design
- Visual Communication
- Information Design
- Film

## Visualisation Fields - Interactive

- Interaction/Game Design
- Geographic Information System (GIS)
- Medical Visualisation
- Scientific Visualisation
- Computer Graphics
- Information Visualisation
- Human Computer Interaction
- Virtual Reality
- Augmented Reality
- Knowledge Visualisation

# Why is this relevant to you?

## Visualisation Methods

- Envisioning (Mental Images, Stories)
- Sketching (Sketch)
- Expressing, Narrating (Images)
- Diagramming (Diagrams, Charts)
- Mapping (Maps)
- Materialising (Objects, Models)
- Exploring (Interactive Visualisations)

## Why is this relevant to you?

One of the architect's key resource in the future is the comprehensive knowledge about different **visualisation methods** and the understanding of **relations, patterns, and principles**.

It is the capacity to create high level design by the combination of Architecture and Information.

Information and Architecture form the stories of the future.



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# Sources

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<http://www.ia.arch.ethz.ch/teaching/>



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