

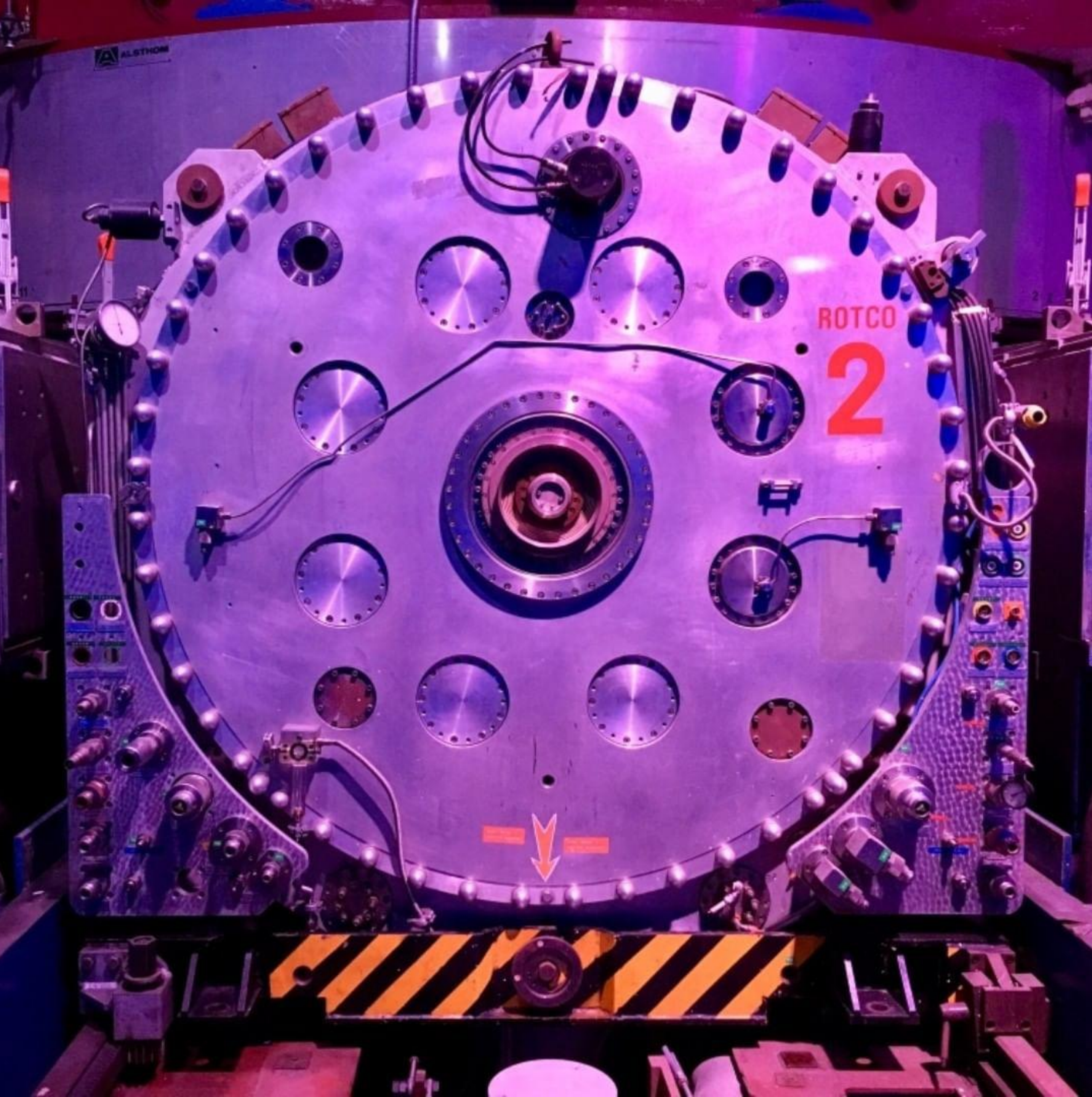
**HOW WE BUILT
THE WORLD WIDE WEB
IN FIVE DAYS**

13.8 BILLION YEARS AGO



*“A physicist is
the atom’s way of
knowing about atoms.”*

64 YEARS AGO



CERN



ar

bin/csh (tty1)

```

localhost:1# cd /home/httpd/WWW/Daemon/next
localhost:2# ls
HTAConfig.o  HTDF
HTAFile.o    HTD
HTAProt.o    HTD
HTAServ.o    HTG
HTACL.o      HTL
HTAuth.o     HTL
HTCache.o    HTL
HTCacheInfo.o  HTLog
HTPasswd.o   HTS
localhost:3# ./httpd -v
This is CERN-HTTPD, vers
ServerRoot... /home/httpd/WWW/Daemon/
Port... 80
Default... user id nobody
Default... group id nogroup
AccessLog... /var/log/httpd-access
ErrorLog... /var/log/httpd-errors
UserDir... enabled ["public_html"]
Exec... /cgi-bin/* -> "/your
Pass... /* -> "/var/www/*
Log... /var/log/httpd-access
Error log... /var/log/httpd-errors
TCP... Local host name is loca
TCP... Full local host name is
Automatic... icon initialization
AutoRule... Pass "/httpd-internal-i
AutoRule... Pass "/http://localhost/
on/next/icons/*
Icon URL... prefix is http://localh
Icons... should be in /home/httpd
AddIcon... BLANK => SRC="http://lo
AddIcon... DIRECTORY => SRC="http:
LT="DIR"
AddIcon... PARENT => SRC="http://lo
AddIcon... UNKNOWN => SRC="http://lo
AddIcon... /* => SRC="http://loca
AddIcon... binary => SRC="http://lo
AddIcon... N
AddIcon... ww/unknown => SRC="htt
AddIcon... LT="--
AddIcon... text/* => SRC="http://loca
AddIcon... image/* => SRC="http://loca
AddIcon... G-
AddIcon... video/* => SRC="http://loca
localhost:
gcc: Comm
localhost:
gcc: Comm
localhost:
gcc: Comm
localhost:
gcc: Comm
localhost:
Reading sp
NeXT Comput
localhost:

```

Resource Index

Computing Business Starting Points Recreation Miscellaneous

HEXISTEP NeXTanswers NeXT Archives Sun Microsystems HTML Spec

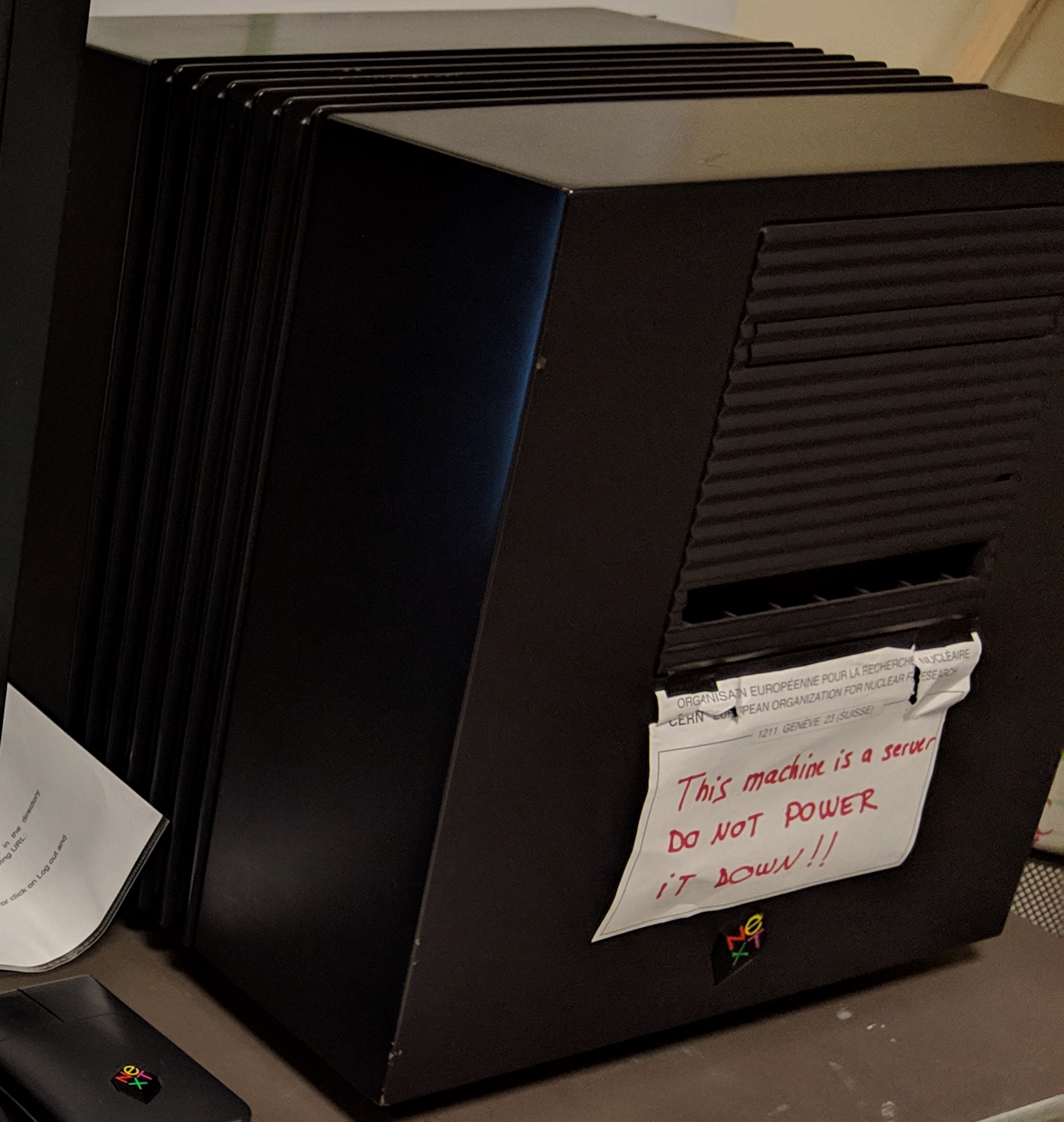
Apple Computer Silicon Graphics Java NetKit Demo Page

Time's up!

This program is not licensed. Your 15-minute demo period has expired.

Title	URL	Path
HTML Spec	Web www.w3.org	/hypertext/WWW/Ma
IndustryNET	Web www.industry.net	/
Intel	Web www.intel.com	/
Intellicast	Gopher ds.intellicast.com	11/ds/internetdocs
Internet Documents	Web www.internet.net	/
Internet Shopping Network	Web java.sun.com	/WNUR/jazz/
Java	Web www.acns.nwu.edu	/homepage/chp.html
JazzWeb	Web marvel.loc.gov	/
Library Of Congress	Web www.lombard.com	/
Lombard Investments		

http://localhost/cern/TheProject.html



ar

bin/csh (tty1)

```

localhost:1# cd /home/httpd/WWW/Daemon/next
localhost:2# ls
HTAConfig.o  HTDF
HTAFile.o    HTD
HTAProt.o    HTD
HTAServ.o    HTG
HTACL.o      HTL
HTAuth.o     HTL
HTCache.o    HTL
HTCacheInfo.o HTLog
HTPasswd.o   HTS
localhost:3# ./httpd -v
This is CERN-HTTPD, vers
ServerRoot... /home/httpd/WWW/Daemon/
Port... 80
Default... user id nobody
Default... group id nogroup
AccessLog... /var/log/httpd-access
ErrorLog... /var/log/httpd-errors
UserDir... enabled ["public_html"]
Exec... /cgi-bin/* -> "/your
Pass... /* -> "/var/www/*
Log... /var/log/httpd-access
Error log... /var/log/httpd-errors
TCP... Local host name is loca
TCP... Full local host name is
Automatic... icon initialization
AutoRule... Pass "/httpd-internal-i
AutoRule... Pass "http://localhost/
on/next/icons/*
Icon URL... prefix is http://localh
Icons... should be in /home/httpd
AddIcon... BLANK => SRC="http://lo
AddIcon... DIRECTORY => SRC="http
LT="DIR"
AddIcon... PARENT => SRC="http://lo
AddIcon... UNKNOWN => SRC="http://lo
AddIcon... /* => SRC="http://loca
AddIcon... binary => SRC="http://lo
AddIcon... N
AddIcon... ww/unknown => SRC="htt
LT="--
AddIcon... text/* => SRC="http://loca
AddIcon... image/* => SRC="http://loca
AddIcon... G
AddIcon... video/* => SRC="http://loca
localhost:
gcc: Comma
localhost:
gcc: Comma
localhost:
gcc: Comma
localhost:
gcc: Comma
localhost:
Reading sp
NeXT Comput
localhost:

```

Resource Index

Computing Business Starting Points Recreation Miscellaneous

HEXISTEP NeXTanswers NeXT Archives Sun Microsystems HTML Spec

Time's up!

This program is not licensed. Your 15-minute demo period has expired.

Icon	URL	Path
HTML Spec	Web www.w3.org	/hypertextd/WWW/Ma
IndustryNET	Web www.industry.net	/
Intel	Web www.intel.com	/
Intellicast	Web www.intellicast.com	11/ds/internetdocs
Internet Documents	Gopher ds.internic.net	/
Internet Shopping Network	Web www.internet.net	/
Java	Web java.sun.com	/WNUR/jazz/
JazzWeb	Web www.acns.nwu.edu	/homepage/chp.html
Library Of Congress	Web marvel.loc.gov	/
Lombard Investments	Web www.lombard.com	/

http://localhost/cern/TheProject.html



CEHN PEAN ORGANIZATION PATTINOZ

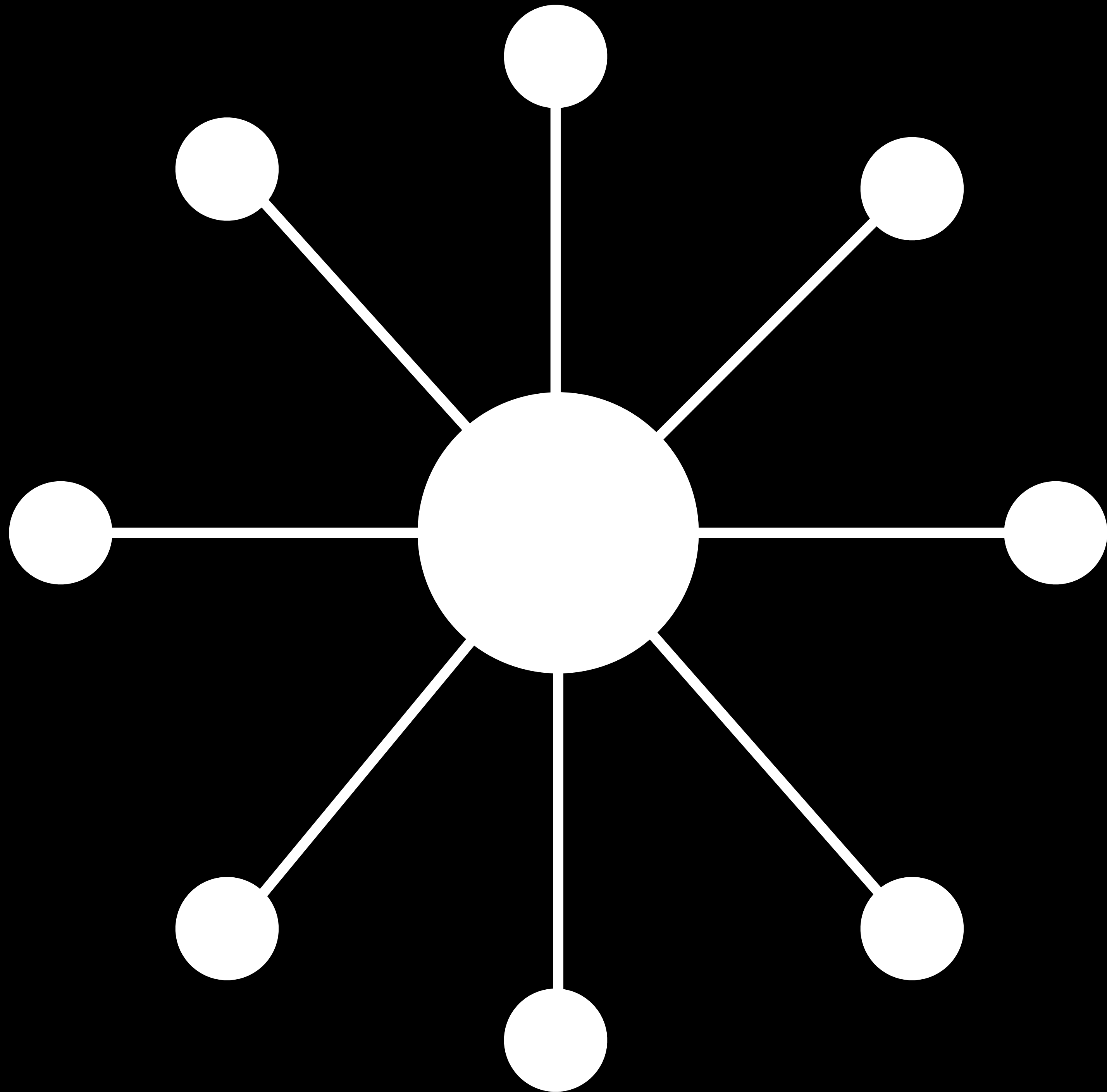
1211 GENEVE 23 (SUISSE)

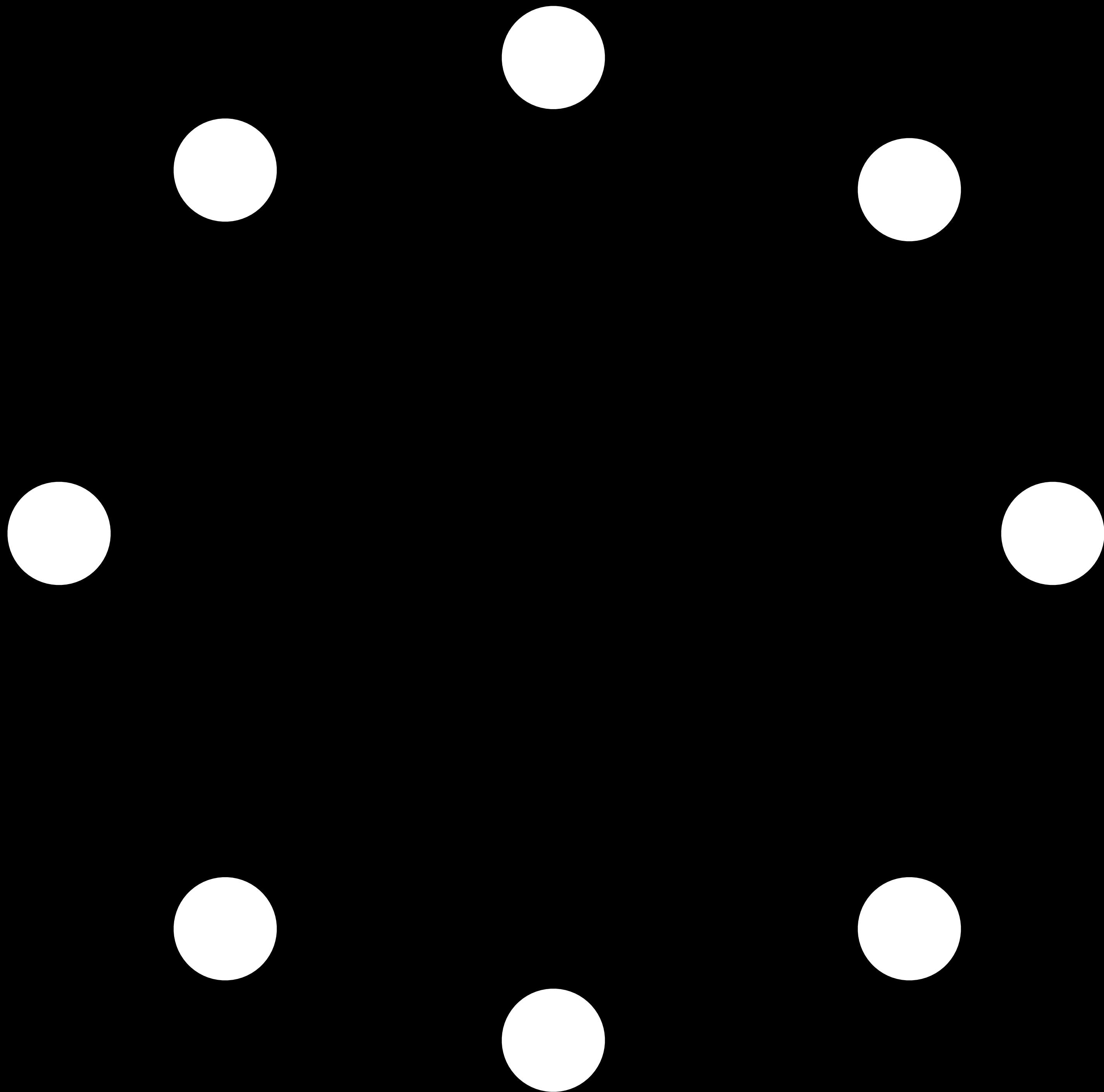
*This machine is a server
DO NOT POWER
IT DOWN!!*

Keyboard and mouse with NeXT logo.

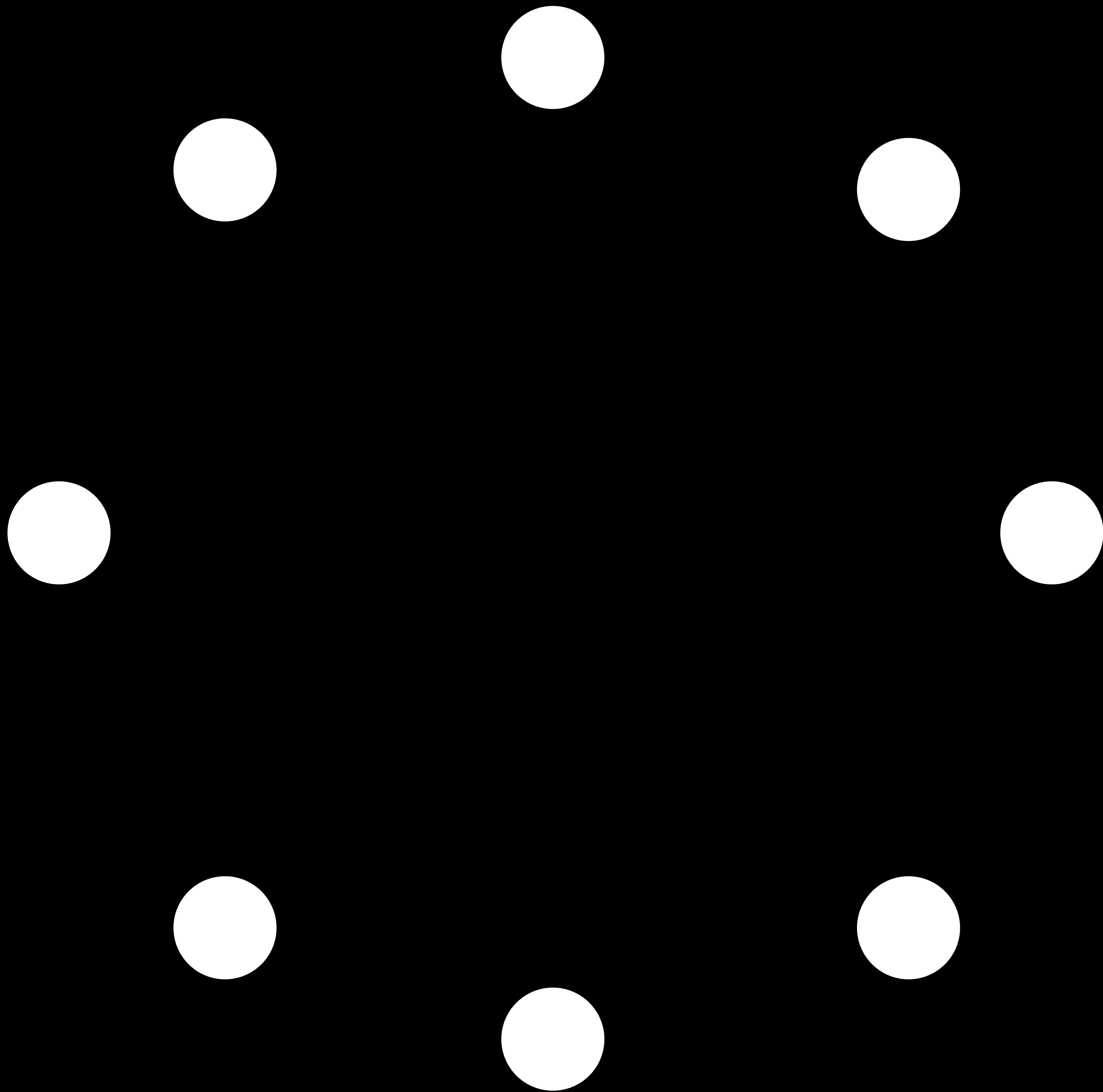
62 YEARS AGO

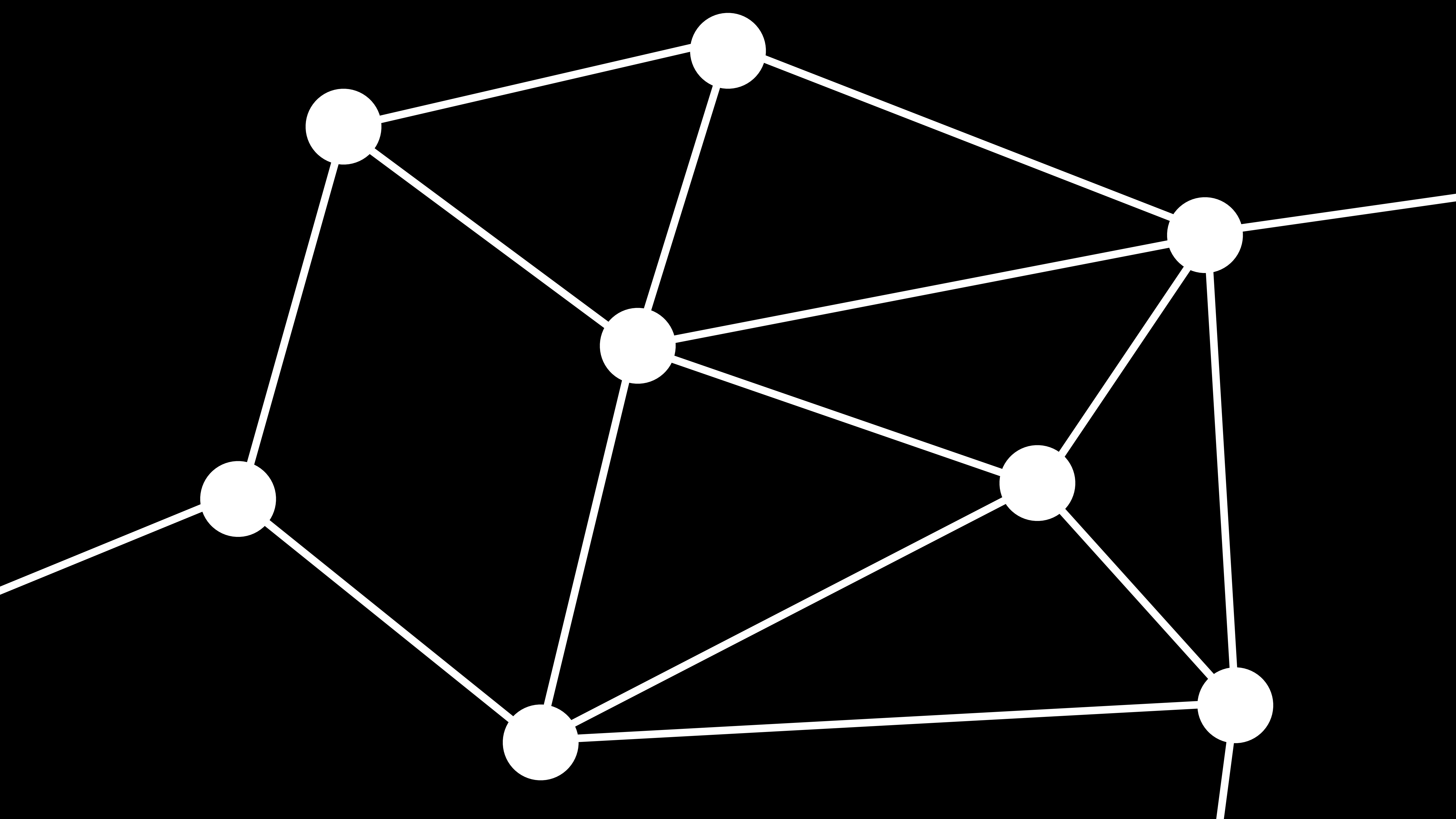
56 YEARS AGO







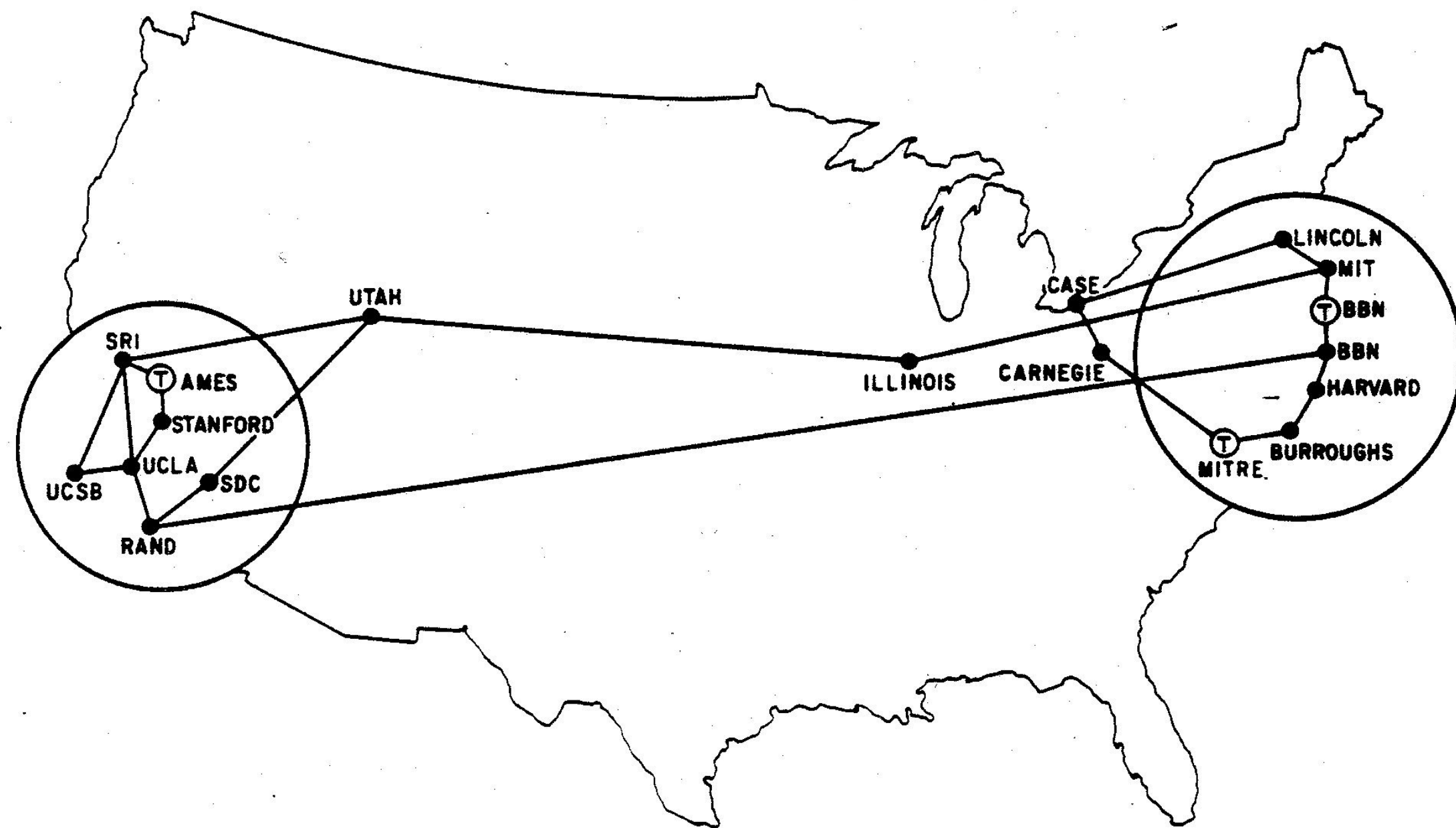


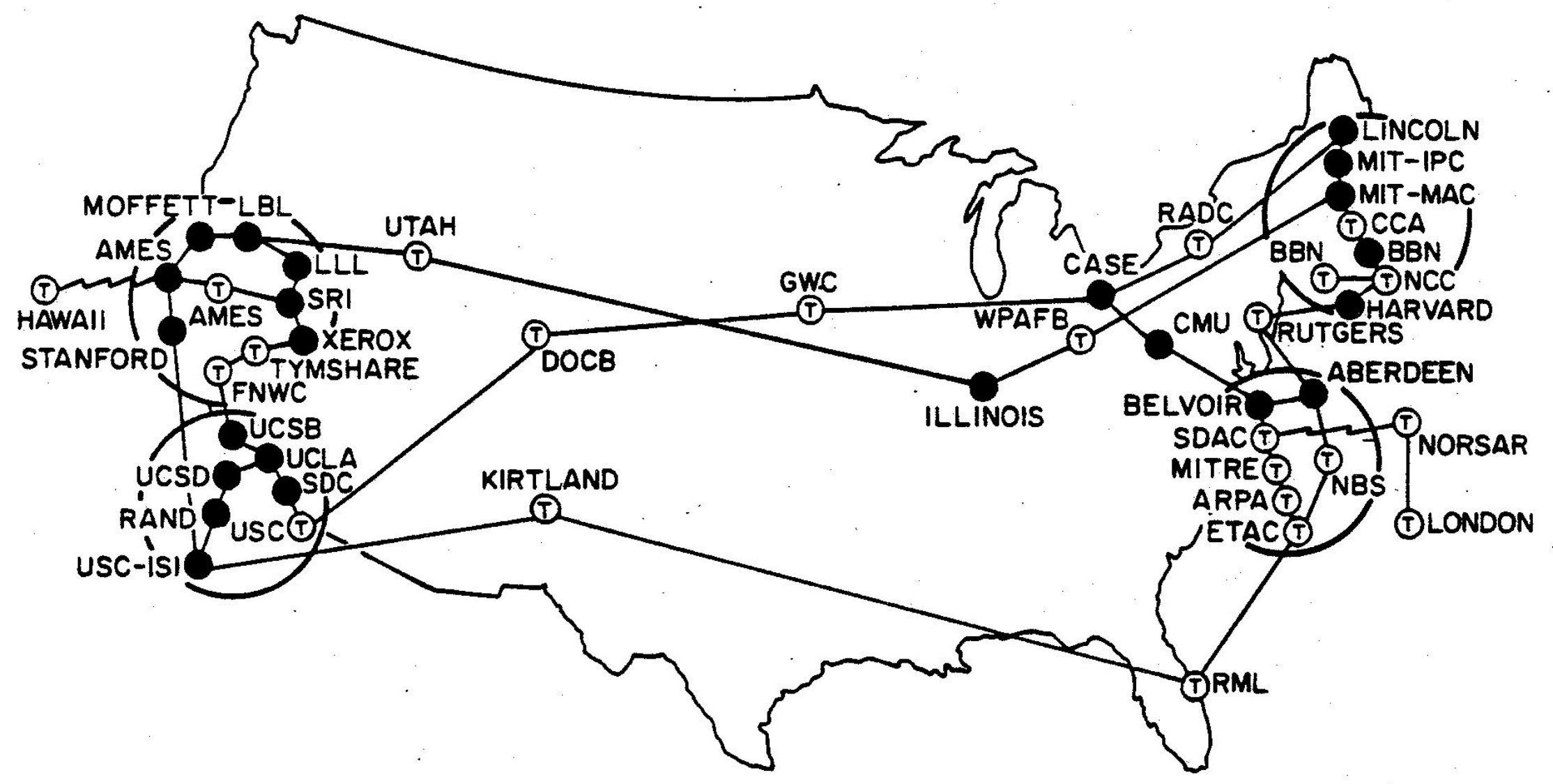


ARPANET

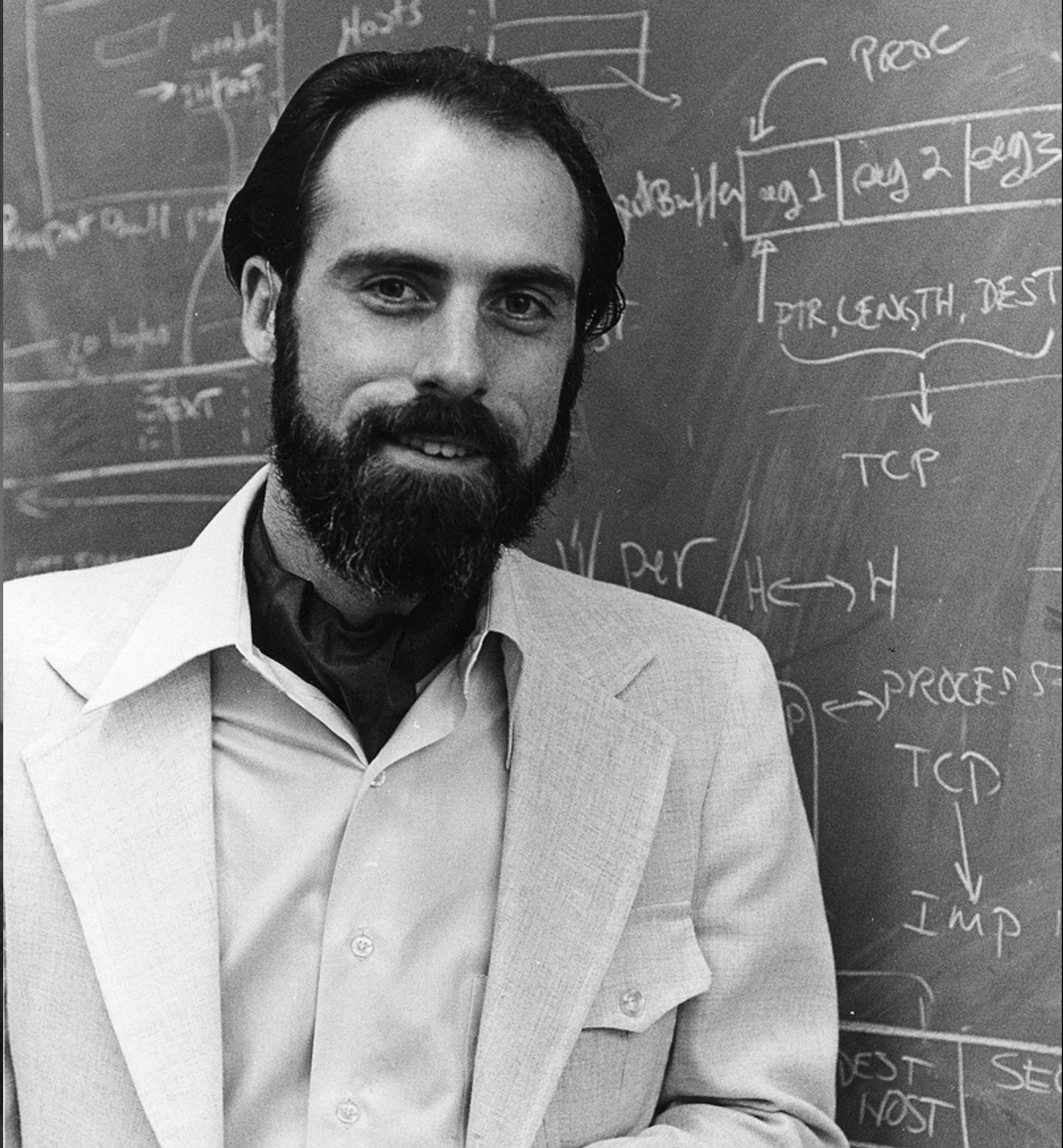


The ARPANET in December 1969





INTERNET

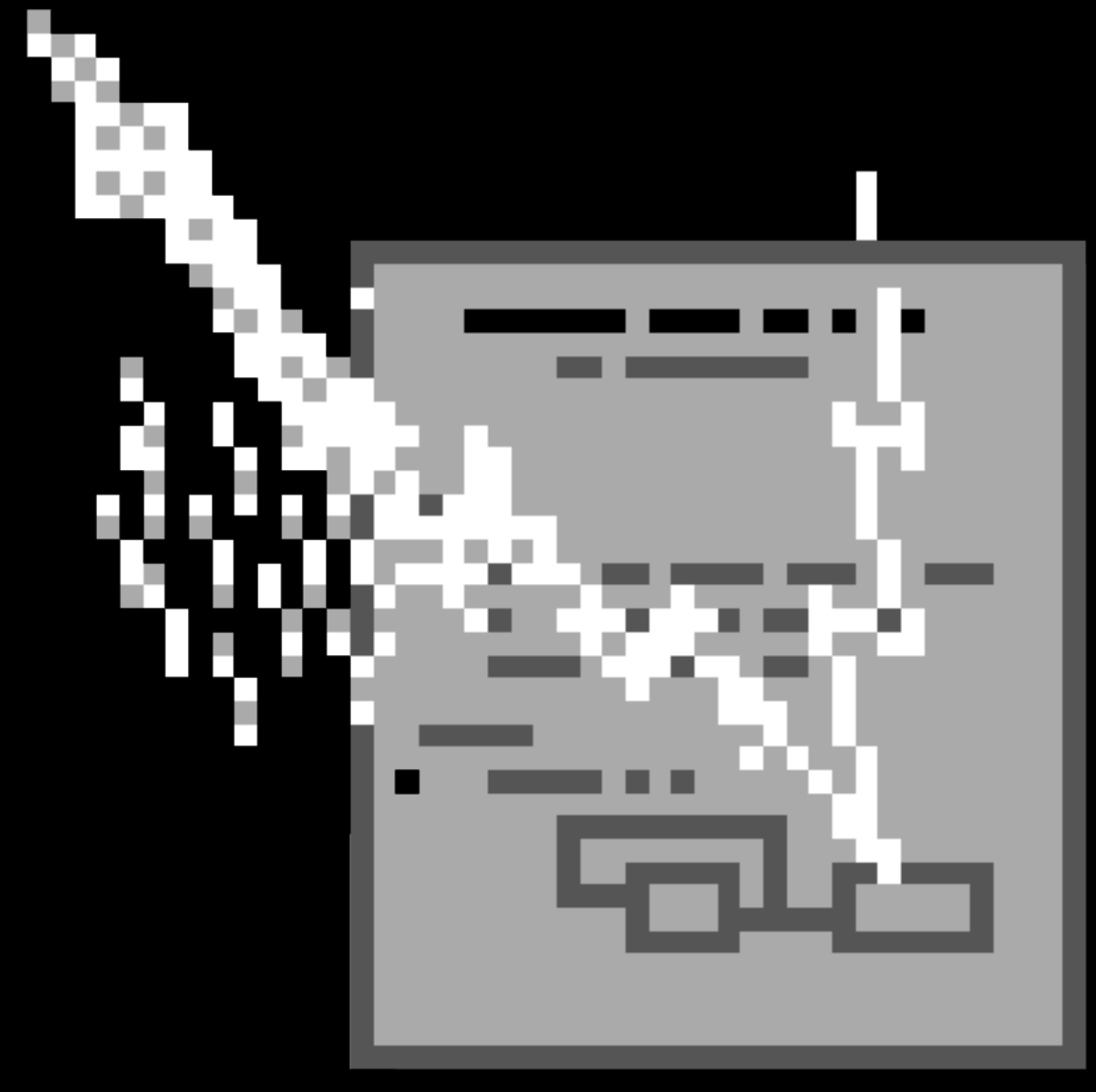


TCP/IP

SMTP

GOPHER

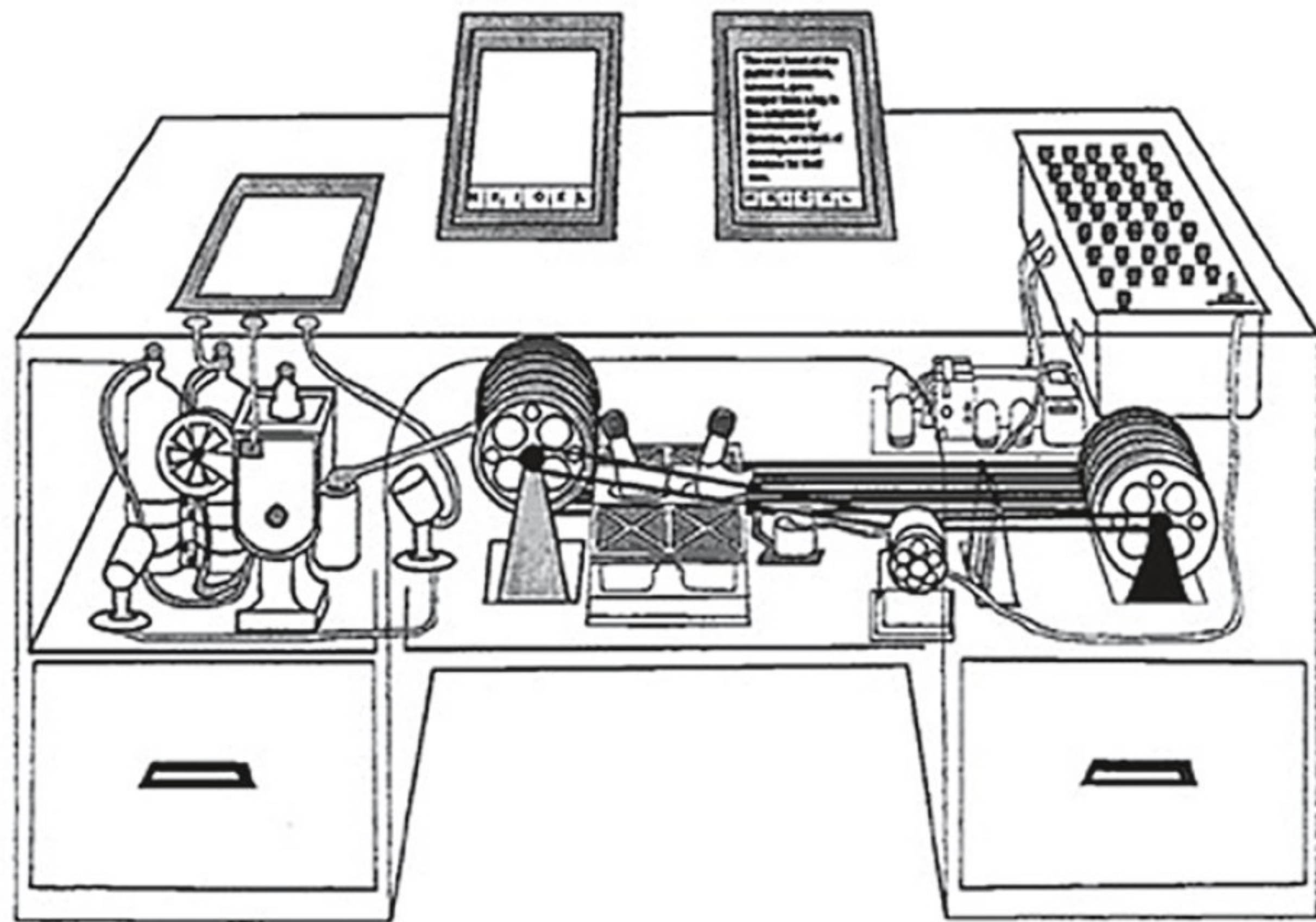
FTP





56 YEARS AGO

*“Hypertext is text
which is not
constrained to be linear.”*





51 YEARS AGO



DEMO

39 YEARS AGO

ENQUIRE

ENQUIRE
WITHIN



Upon
Everything



30 YEARS AGO

CERN DD/OC

Tim Berners-Lee, CERN/DD

Information Management: A Proposal

March 1989

Information Management: A Proposal

Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project

THE MESH

THE INFORMATION MINE

THE WORLD WIDE WEB

HTTP

HTML

UDI

URI

URL

THE WORLD WIDE WEB

HTTP URL HTML



WORLDWIDEWEB.APP

WORLDWIDEWEB.APP

HTTPS

HTTP2

HTTP1.0

~~HTTPS~~

~~HTTP2~~

~~HTTP1.0~~

MITM +
HTTP 0.9!

WorldWideWeb	Document	
Info	Open file...	o
Navigate	Open given document address	O
Document	New file...	n
Edit	Save	s
Find	Save all edited windows	S
Links	Save a copy in	▶
Style	Inspect ...	3
Print...	(Diagnostics)	▶
Page layout...	Miniaturize	
Windows	Open master template document	
Services	Close all other windows	W
Hide	Close	w
Quit		q

Document Inspector ✕


Title:

Address:

Other document







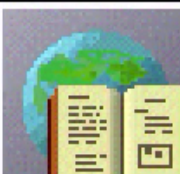
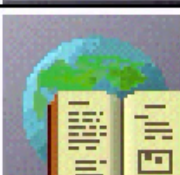
▶

Address:



22:01

SUN
5
FEB



<H1>

<H2>

<H3>

<H4>

<H5>

<H6>

<P>

SGML

GML

SGML

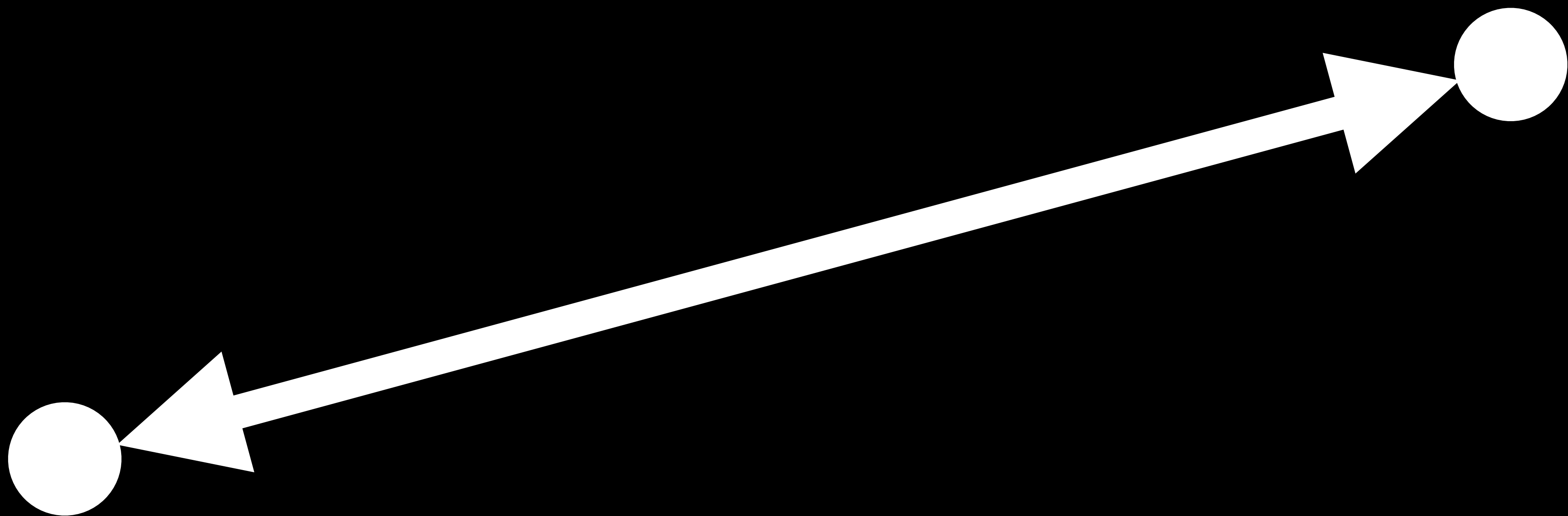
HTML

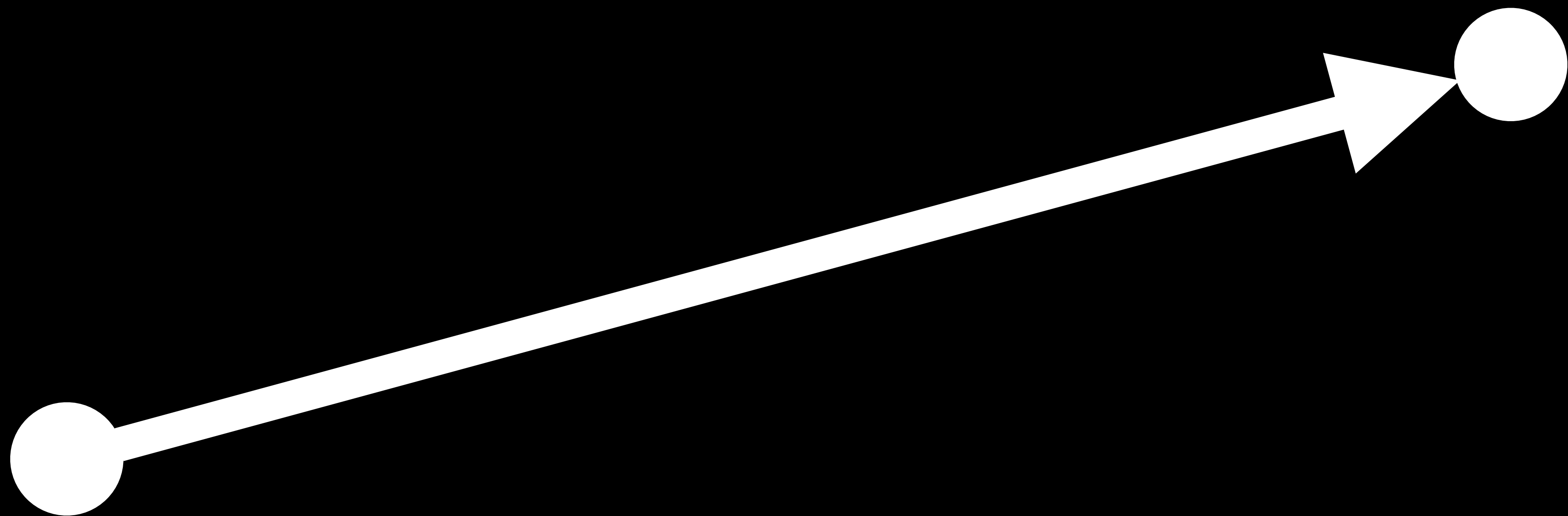
<A>

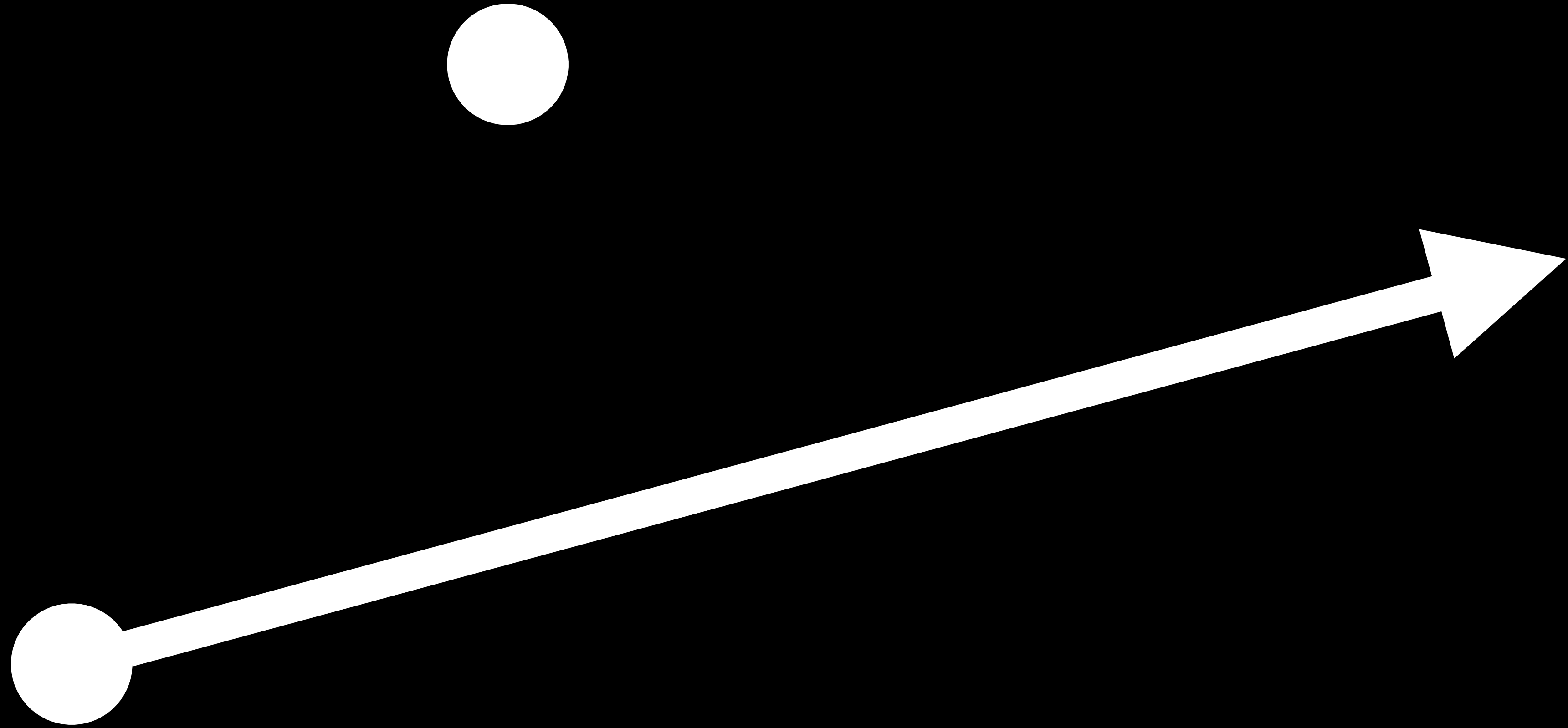
HREF











PARSING HTML

Blocks of Tetris code

```
k rel="webmention" href="https://webmention.io/remysharp.com/webmention">
```

```
k rel="pingback" href="https://webmention.io/remysharp.com/xmlrpc">
```

```
k rel="canonical" href="https://remysharp.com/2019/09/10/blocks-of-tetris-code">
```

```
k rel="search" type="application/opensearchdescription+xml"  
  href="https://remysharp.com/latest/opensearch.xml"  
  title="Remy Sharp's b:log">
```

```
k rel="canonical" href="https://remysharp.com/2019/09/10/blocks-of-tetris-code">
```

```
k rel="icon" sizes="192x192"  
  href="https://remysharp.com/latest/images/avatar-favico"
```

```
k rel="apple-touch-icon"  
  href="https://remysharp.com/latest/images/avatar-favico"
```

`<link rel="" ..."`

`>`

`<link rel="" ..."`

`<1`


```
<link rel="" ..."
```

```
<li
```

`<link rel="" ..."`

`<lin`

<link rel="..."

<link __(ツ)_/_

k rel="..."

- Info
- Navigate
- Document
- Edit
- Find
- Links
- Style
- Print

- Page Layout
- Document**
 - Open file...
 - Open given document address
 - New file...
- Windows
- Services
- Hide

Adactio: Jeremy Keith

Tuesday, February 12th, 2019

Back at CERN

We got the band back together.

In September of 2013, I had the great pleasure bunch of very smart people. I'm not sure there to recreate the experience of using the li

Just to be clear, the line-mode browser wasn't honour goes to Tim Berners-Lee's WorldWideWeb platform and was, therefore, instrumental in de universally-accessible medium.

In the run-up to the 30th anniversary of the ori would become the World Wide Web, we experience of using that first web

Legend

A label

WorldWideWeb

Info

Navigate

Print p

Page layout...

Navigation

< Back Back up Next >

Home Help

Find unstyled text

Style Editor

Style name: List

<< style of selection >>

Apply to selection

Apply style to all similar text

Find unstyled text

Style sheet

Open

Save as...

Format

First line indent: 100

Successive indent: 130

Font: Helvetica

Font size: 12

SGML tag: Set

Tabs:

Open using hypertext reference

Reference:

Diagnostics only

Open showing source

Open

CERN 2019 WorldWideWeb Rebuild

2019 rebuilding of the original NeXT web browser

[Launch WorldWideWeb](#)

[Home](#) [History](#) [Timeline](#) [The Browser](#) [Typography](#) [Inside the Code](#) [Production Process](#)

Hello, World

In December 1990, an application called WorldWideWeb was developed on a NeXT machine at The European Organization for Nuclear Research (known as CERN) just outside of Geneva. This program – WorldWideWeb — is the antecedent of most of what we consider or know of as "the web" today.

In February 2019, in celebration of the thirtieth anniversary of the development of WorldWideWeb, a group of developers and designers convened at CERN to rebuild the original browser *within* a contemporary browser, allowing users around the world to experience the rather humble origins of this transformative technology.

This project was supported by the US Mission in Geneva through the CERN & Society Foundation.

Party like it's 1989

Ready to browse the World Wide Web using WorldWideWeb?

1. [Launch the WorldWideWeb browser.](#)
2. Select "Document" from the menu on the side.
3. Select "Open from full document reference".
4. Type a URL into the "reference" field.
5. Click "Open".

[Click here to jump in](#) (and remember you need to double-click on links):

[Launch WorldWideWeb](#)

The screenshot shows a window titled "The World Wide Web project" with a close button in the top right corner. The main content area is titled "World Wide Web" and contains the following text:

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#) , [Policy](#) , November's [W3 news](#) , [Frequently Asked Questions](#) .

[What's out there?](#) Pointers to the world's online information, [subjects](#) , [W3 servers](#), etc.

[Help](#) on the browser you are using

[Software Products](#) A list of W3 project components and their current state. (e.g. [Line Mode](#) , [X11 Viola](#) , [NeXTStep](#) , [Servers](#) , [Tools](#) , [Mail robot](#) , [Library](#))

[Technical](#) Details of protocols, formats, program internals etc

[Bibliography](#) Paper documentation on W3 and references.

[People](#) A list of some people involved in the project.

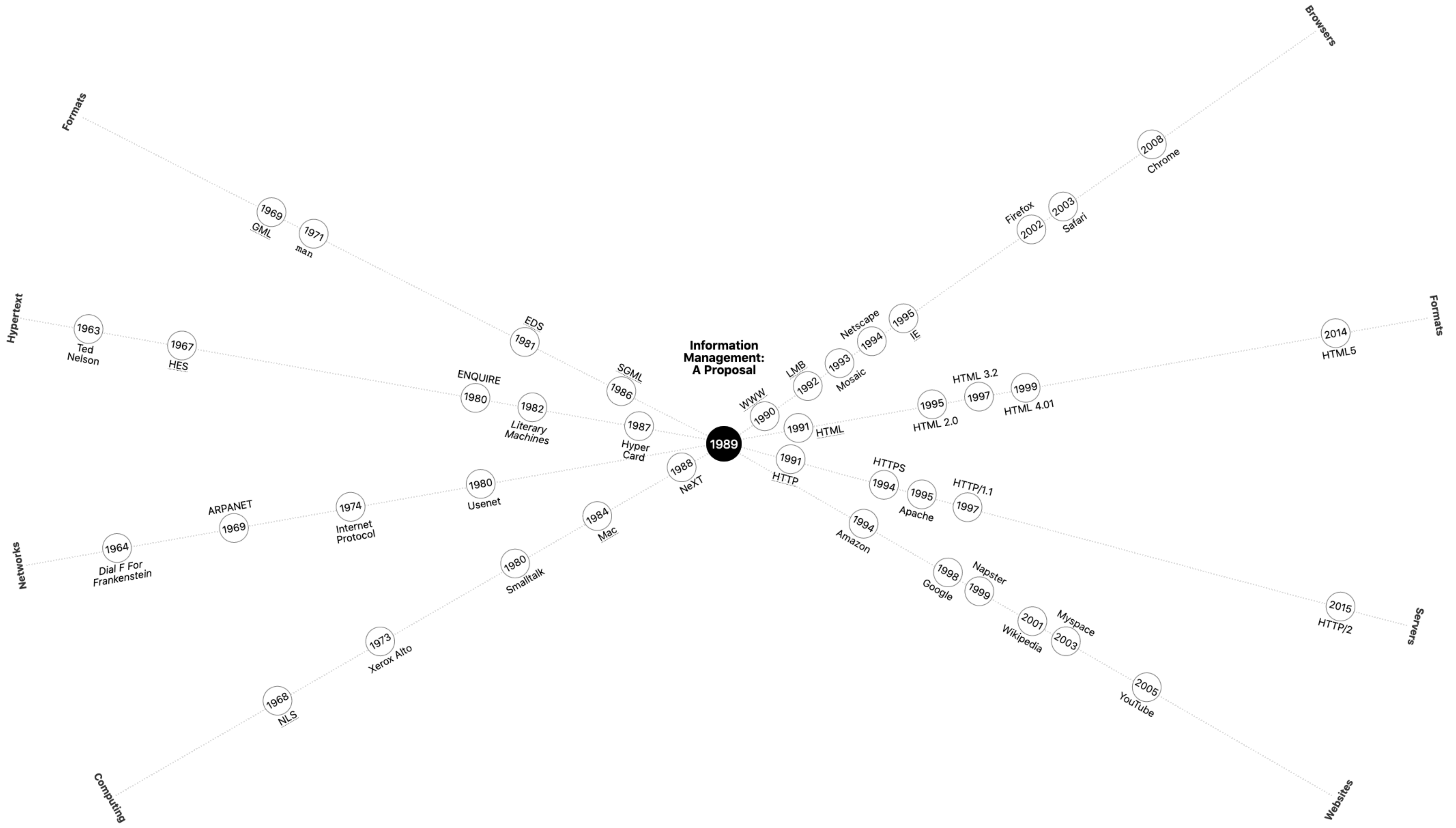
[History](#) A summary of the history of the project.

[How can I help ?](#) If you would like to support the web..

[Getting code](#) Getting the code by [anonymous FTP](#) , etc.

How To Open a URL

The screenshot shows the same page as above, but with a video player overlay in the center. The video player has a play button and a progress bar. The page content is partially obscured by the video player.



**Information Management:
A Proposal**

1989

Formats

Hypertext

Networks

Computing

Websites

Formats

Servers

Browsers

1969
GML

1971
man

1981
EDS

1986
SGML

1963
Ted Nelson

1967
HES

1980
ENQUIRE

1982
Literary
Machines

1987
Hyper
Card

1988
NeXT

1990
WWW

1992
LMB

1993
Mosaic

1994
Netscape

1995
IE

1995
HTML 2.0

1997
HTML 3.2

1999
HTML 4.01

1964
Dial F For
Frankenstein

1969
ARPANET

1974
Internet
Protocol

1980
Usenet

1980
Smalltalk

1984
Mac

1991
HTTP

1991
HTML

1994
HTTPS

1995
Apache

1997
HTTP/1.1

1998
Google

1999
Napster

2001
Wikipedia

2003
Myspace

2005
YouTube

2002
Firefox

2003
Safari

2008
Chrome

2014
HTML5

2015
HTTP/2

T Y P O G R A P H Y

!"#\$%&'()*+,-./0123456789:; ?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿àáâãäåæçèéêëìíîïð
ñòóôõöøùúûüýþÿ

!"#\$%&'()*+,-./0123456789:; ?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿àáâãäåæçèéêëìíîïð
ñòóôõöøùúûüýþÿ

!"#\$%&'()*+,-./0123456789:; ?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿àáâãäåæçèéêëìíîïð
ñòóôõöøùúûüýþÿ

!"#\$%&'()*+,-./0123456789:; ?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿àáâãäåæçèéêëìíîïð
ñòóôõöøùúûüýþÿ

!"#\$%&'()*+,-./0123456789:; ?@
ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~
ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿àáâãäåæçèéêëìíîïð
ñòóôõöøùúûüýþÿ

!"#\$%&'()*+,-./0123456789:; ?@
ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~
ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿àáâãäåæçèéêëìíîïð
ñòóôõöøùúûüýþÿ

!"#\$%&'()*+,-./0123456789:;?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾àáâãäåæçèéêëìíîïð
ñòóôõö÷øùúûüýþÿ

!"#\$%&'()*+,-./0123456789:;?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾àáâãäåæçèéêëìíîïð
ñòóôõö÷øùúûüýþÿ

!"#\$%&'()*+,-./0123456789:;?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾àáâãäåæçèéêëìíîïð
ñòóôõö÷øùúûüýþÿ

!"#\$%&'()*+,-./0123456789:;?@ ABCDEFGHIJKLMNOPQRSTUVWXYZ[_`
abcdefghijklmnopqrstuvwxyz{|}~ ÀÁÂÃÄÅÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖÙÚÛÜÝÞµ×÷
©¡¢£/¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾àáâãäåæçèéêëìíîïð
ñòóôõö÷øùúûüýþÿ

WorldWideWeb	Document
Info	Open file... o
Navigate	Open from full document reference O
Document	New file... n
Edit	Save s
Links	Save all edited windows S
Style	Save a copy offline
Print	(Diagnostics) ▶
Page Layout	Miniaturize
Windows	Open master template document
Services	Close all other windows W
Hide	Close w
Quit	q

Navigate	
Back	^
Next	>
Previous	<
Home	H
Panel	

Welcome to the Universe of HyperText

Home

Access to this information is provided as part of the [WorldWideWeb](#) project. The WWW project does not take responsibility for the accuracy of information provided by others.

How to proceed

References to other information are represented like [this](#) . Double-click on it to jump to related information.

General CERN Information sources

Now choose an area in which you would like to start browsing. The system currently has access to three sources of information. With the indexes, you should use the keyword search option on your browser.

CERN Information	A general keyword index of information made available by the computer centre, including CERN, Cray and IBM help files, "Writeups", and the Computer Newsletter (CNL). (This is the same data on CERNVM which is also available on CERNVM with the VM FIND command) .
Yellow Pages	A keyword index to the CERN telephone book by function.
Internet News	You can access the internet news scheme (See information for new users). News articles are distributed typically CERN-wide or worldwide, and have a finite lifetime.

Newsgroups which may be of general interest at CERN include

- [CERN/ECP news](#)
- [STING \(Software Technology Interest Group\) news.](#)

NeXT-related

If you have a NeXT machine, see also the following topics:

HELP	on this WorldWideWeb application
Installation at CERN	A few notes on installing NeXTs and applications at CERN.
comp.sys.next.announce	The NeXT announcements newsgroup
comp.sys.next.programmer	The NeXT programmer's newsgroup
comp.sys.next.misc	The NeXT miscellaneous newsgroup
comp.sys.next.suadmin	The NeXT miscellaneous newsgroup

WorldWideWeb	Info
Info	Panel...
Navigate	Help...
Document	
Edit	
Links	
Style	
Print	p
Page Layout	
Windows	
Services	
Hide	h
Quit	q

Welcome to the Universe of HyperText

Home

Access to this information is provided as part of the WorldWideWeb project. The WWW project does not take responsibility for the accuracy of information provided by others.

How to proceed

References related information

General CERN Information

Now choose from the list of links which has access to the WWW. You can also use the keyword search facility.

[CERN Information](#)

[Yellow Pages](#)

[Internet News](#)

NeXT-related

If you have a NeXT machine, see also the following topics:

[HELP](#) on this WorldWideWeb application

[Installation at CERN](#) A few notes on installing NeXTs and applications at CERN.

[comp.sys.next.announce](#) The NeXT announcements newsgroup

[comp.sys.next.programmer](#) The NeXT programmer's newsgroup

[comp.sys.next.misc](#) The NeXT miscellaneous newsgroup

[comp.sys.next.sysadmin](#) The NeXT miscellaneous newsgroup

Info

HyperMedia Browser/Editor Version 1.0
Alpha only

An **exercise** in global information availability

by Tim Berners-Lee

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HyperText: Text which is not constrained to be linear.

HyperMedia: Information which is not constrained linear... or to be text.

- This is the first version of the NextStep WorldWideWeb application with the libWWW library. Bug reports to www-bug@info.cern.ch. Check the list of known bugs in the web too.

This was the original prototype for the World-Wide Web. Many browsers for other platforms now exist. Read the web for details.

You should configure the newsreader code in this application to know where your local news (NNTP) server is. Type in a terminal window

```

dwrite WorldWideWeb NewsHost xxxx

```

Web@ 30

1989 - 2019

12 mars / March 2019

Remy

Sharp



W3C



WORLD WIDE WEB
FOUNDATION







Jean-François Groff



11 MARCH 2019

🔒 Messages to this chat and calls are now secured with end-to-end encryption. Tap for more info.

Sitting with Tim right now. He loves your browser!

20:08

That's very nice to hear! 20:20 ✓✓



Dinner with Sir Tim

20:30

Crushed it.



CSS
(196)

I.E.
(195)

NETSCAPE
(94)

MOSAIC
'93

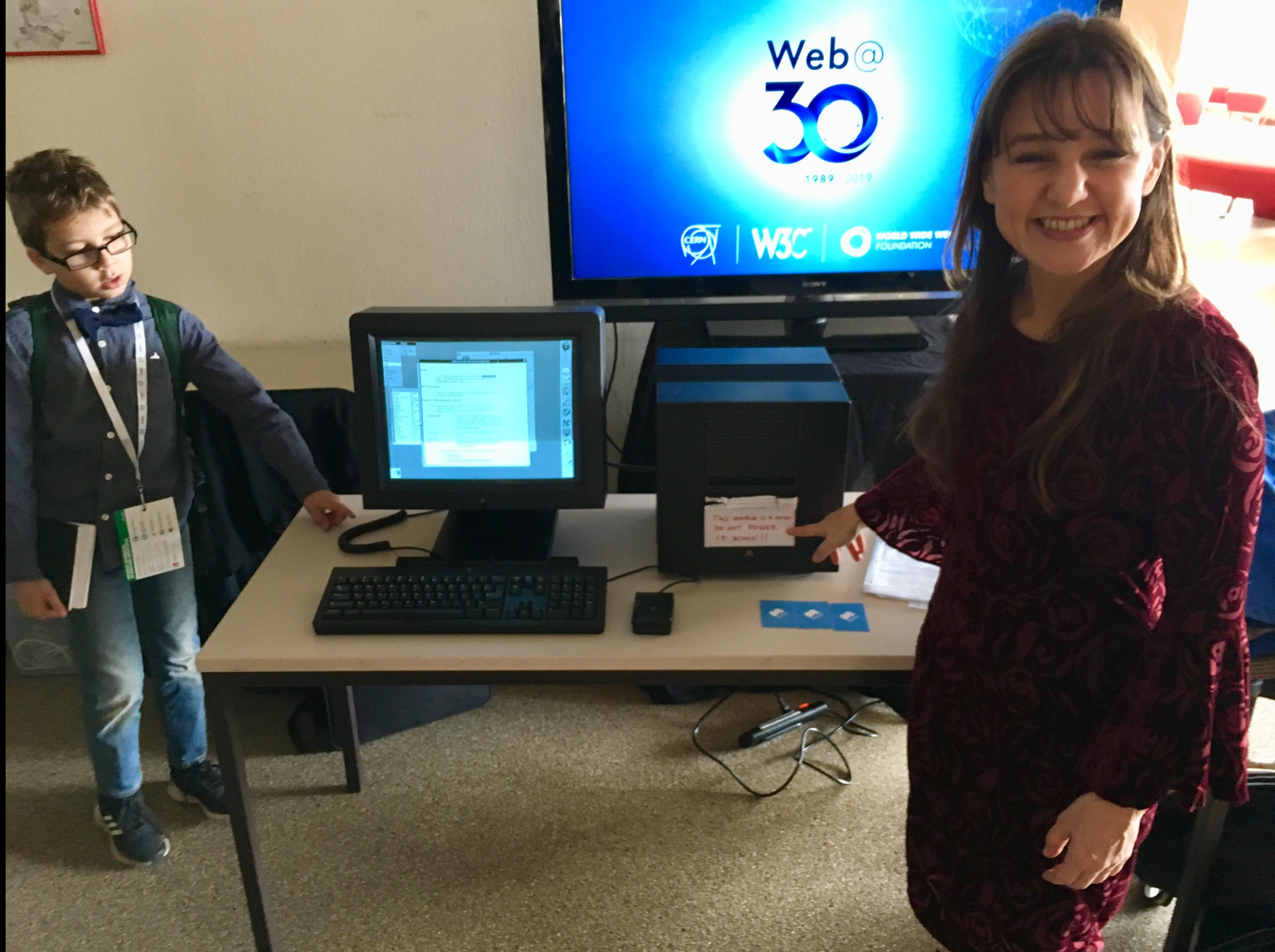
VIOLA

(1992)

LINE-
MODE

LIBWWW
(91)

WORLD
WIDE
WEB.
APP





1989 - 2019



CERN



*“If you have
something wonderful,
if you do not defend it,
you will lose it”*

*you have
something wonderful;
defend it*



THIS IS FOR EVERYONE

THIS IS FOR EVERYONE

THIS IS FOR EVERYONE

THANK YOU

worldwideweb.cern.ch