

# R102

## DÉVELOPPEMENT D'INTERFACES WEB

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# **ORGANISATION GÉNÉRALE**

# R 102 : DÉVELOPPEMENT D'INTERFACES WEB

## ORGANISATION

Volume séances/horaires

- Cours : 5h d'amphi
- TD : aucun
- TP : 9+2 séances de 1h30
- Très peu ⇒ boulot perso obligatoire

# R 102 : DÉVELOPPEMENT D'INTERFACES WEB

## EVALUATIONS

- Des QCMs
- 1 CTP

# **SAÉ 1.05/1.06**

Recueil de besoins et découverte de l'environnement économique et écologique

## **PROJET COMMUN AUX RESSOURCES**

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IGO      R1.08    Base de la gestion des organisations

Comm    R1.11    Base de la communication

Web      R1.02    Base du web

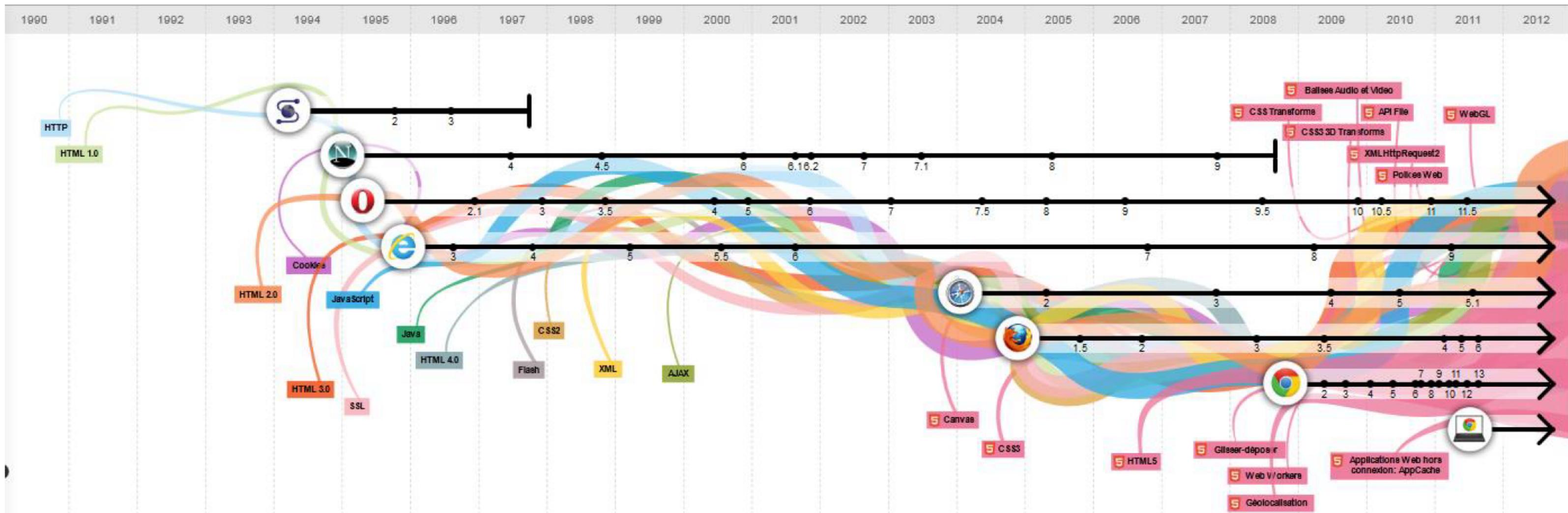
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# UNE BRÈVE HISTOIRE DU WEB



# TIMELINE FUN (MAIS SÉRIEUSE)

Reconnaissez-vous ces logos ?



# TIMELINE FUN (MAIS SÉRIEUSE)

Réponse

-  Mosaïc (Un succès)
-  Netscape (base de Firefox)
-  Opéra (Utilise maintenant le moteur de rendu de Chrome)
-  Internet Explorer (heureusement en voie de disparition)

# TIMELINE FUN (MAIS SÉRIEUSE)

Réponse

-  Safari
-  Firefox
-  Chrome
-  Edge (Utilise maintenant le moteur de rendu de Chrome)

# TIMELINE DU W3C

## World Wide Web Consortium



### Pre-W3C Web and Internet Background

- 1945: Vannevar Bush article in Atlantic Monthly describes a photo-electrical-mechanical device called a Memex, for memory extension, which could store and follow links between documents on microfilm.
- 1960: J.C.R. Licklider publishes "Man-Computer Symbiosis."
- 1962: Douglas Engelbart publishes "Augmenting Human Intellect: A Conceptual Framework."
- 1965: Ted Nelson coins the term "Hypertext" in "A File Structure for the Complex, the Changing and the Indeterminate." 20th National Conference, New York, Association for Computing Machinery.
- 1968: Douglas Engelbart demonstrates Online System (NLS).

pre 1979

- 1969: Advanced Research Projects Agency commissions ARPANET to conduct research on networking.
- 1971: Ray Tomlinson of BBN creates email program to send messages across a distributed network.
- 1972: Tomlinson expands program to ARPANET users, using the "@" sign as part of the address.
- 1974: Vint Cerf and Bob Kahn publish "A Protocol for Packet Network Interconnection", which specifies in detail the design of a Transmission Control Protocol (TCP).
- 1978: Part of TCP published separately as the Internet Protocol (IP).

pre 1989

- 1984: Paul Mockapetris introduces Domain Name System (DNS).

- 1989
  - Mar: Tim Berners-Lee circulates "Information Management: A Proposal" for comments at CERN.

- 1990
  - Jan: Number of browsers increases; includes Midas, Erwise, Viola, and Samba.
  - Dec: Hypertext '91 Conference in San Antonio, Texas (USA). Tim Berners-Lee paper on Web only accepted as poster session.
  - Dec: First Web server outside of Europe set up at Stanford University.

- 1991
  - Mar: Tim Berners-Lee writes a program, "Enquire-Within-Upon-Anything", which allows links to be made between arbitrary nodes.

- 1992
  - End 1990: Development begins for first browser (called "WorldWideWeb"). It's a server- and line-mode browser. Culminates in first Web client-server communication over Internet in December 1990.

- 1993
  - May: Tim Berners-Lee publishes version 2 of "Information Management: A proposal."

- 1994
  - Feb: Tim Berners-Lee meets Michael Dertouzos in Zurich to discuss possibility of starting new organization at MIT.
  - Traditional dial-up systems (CompuServe, AOL, Prodigy) begin to provide Internet access.
  - 1 Oct: W3C created.

### W3C

- Mark Andressen and colleagues leave NCSA to form Mosaic Communications Corp., which later became Netscape.
- Feb: Tim Berners-Lee meets Michael Dertouzos in Zurich to discuss possibility of starting new organization at MIT.
- Traditional dial-up systems (CompuServe, AOL, Prodigy) begin to provide Internet access.
- 1 Oct: W3C created.
- Apr: INRIA becomes W3C Host in Europe.
- Jun: In response to "Peabody meeting" W3C forms Process ERB.
- Sep: Keio University becomes W3C Host in Asia.
- Nov: W3C launches Offices program.
- Jul: W3C charters Technical Architecture Group (TAG).
- Jan: ERCIM replaces INRIA as W3C Host in Europe.
- Feb: W3C adopts Royalty-Free Patent Policy.

### Starting year of current W3C Activities

- |                                    |                                    |  |  |  |  |   |   |
|------------------------------------|------------------------------------|--|--|--|--|---|---|
| • Graphics                         | • Math                             | • Internationalization   | • URI  | • Device Independence  | • Multimodal Interaction   | • XForms  | • Compound Document Formats                             |
| • Hypertext Markup Language (HTML) | • Extensible Markup Language (XML) |  |  | • Voice Browser  | • Semantic Web   | • Web Services  |   |
| • Style                            |                                    | • Document Object Model (DOM)  | • Patent Policy  | • Privacy  | • XML Key Management   |   | • Quality Assurance                                     |
|                                    |                                    | • Mar: NCSA releases first alpha version of Mosaic for X Windows.  | • Apr: CERN agrees to allow anyone to use Web protocol and code royalty free.                  | • Jun: Dale Dougherty of O'Reilly hosts WWW Wizards Workshop in Cambridge, Massachusetts, USA.   | • Aug: At a Newcastle, UK conference, Tim Berners-Lee discusses the future of the Web with MIT's David Gifford, who suggests that Tim contact Michael Dertouzos. | • Sep: Keio University becomes W3C Host in Asia.        | • Oct: W3C charters Technical Architecture Group (TAG). |
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### Web conference

- ★ Geneva (Jun)  
★ Chicago (Oct)
- ★ Darmstadt (Apr)  
★ Boston (Dec)
- ★ Paris, Largest conference to date.
- ★ Santa Clara
- ★ Brisbane
- ★ Toronto
- ★ Amsterdam
- ★ Hong Kong
- ★ Honolulu
- ★ Budapest
- ★ New York

### Web servers

1	10	50	623	10,022	100,000	603,367	~1.6 million	~3.7 million	~9.5 million	~26 million	~36 million	~35 million	~46+
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# **LES GRANDES IDÉES QUI ONT MENÉ AU WEB MODERNE**

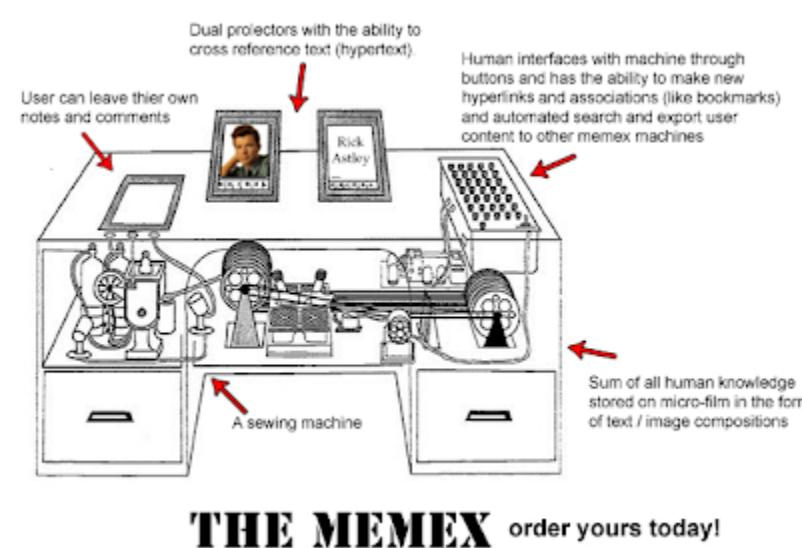
# 1945

## VANEVAR BUSH (1890 – 1974)

- As we may think : <https://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881> (traduction)



- Memex : Memory Extender



# 1960

## TED NELSON (1937-)

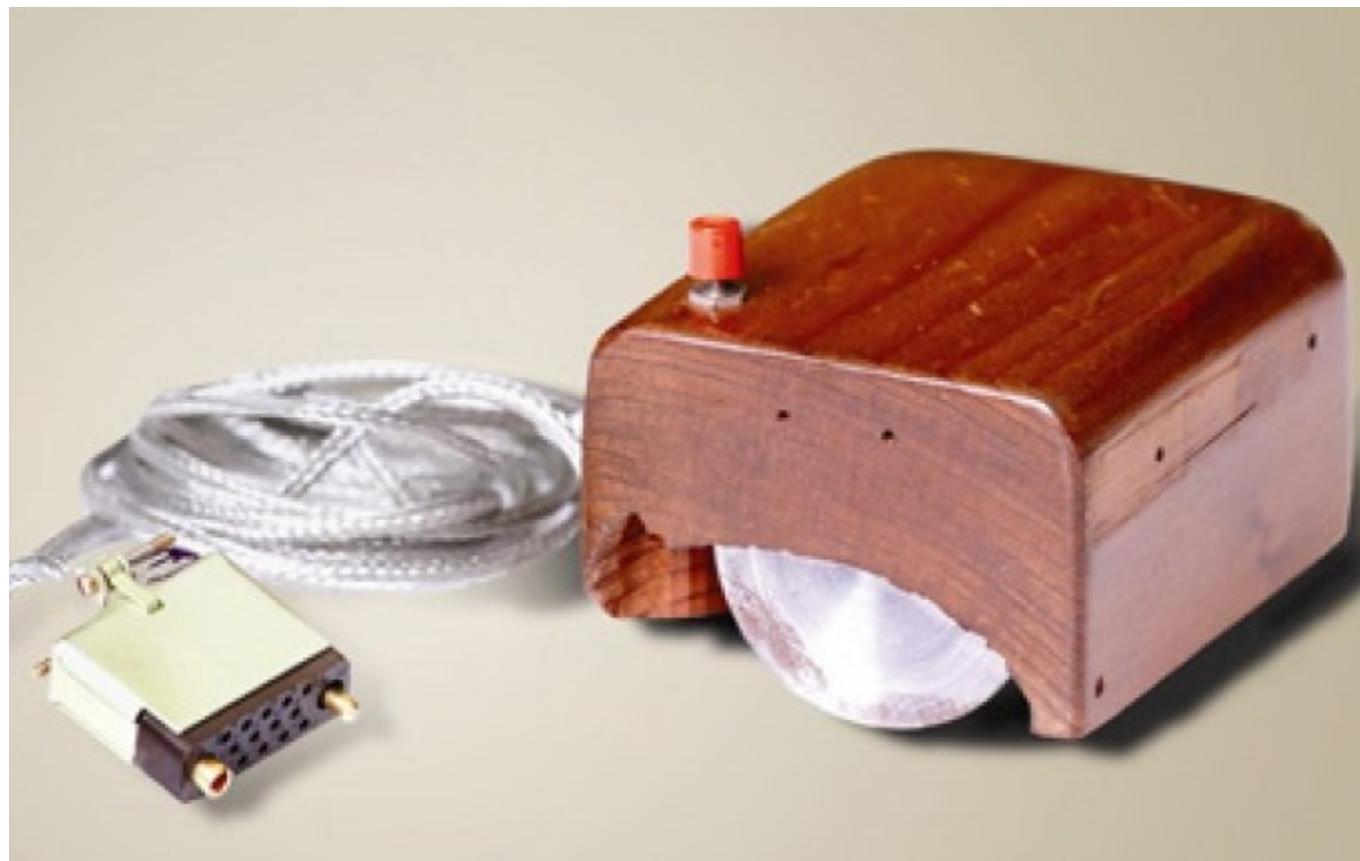
- Sociologue, historien des technologies de l'information
- Notion de système d'information et de référence croisé (précurseur des liens web)
- **Projet Xanadu** machine contenant une bibliothèque universelle, inachevée. <http://xanadu.com> & [https://fr.wikipedia.org/wiki/Projet\\_Xanadu](https://fr.wikipedia.org/wiki/Projet_Xanadu)
- **1965** : Inventeur du mot "*hypertexte*" (et la de lecture non linéaire)



**1968**

**DOUGLAS ENGELBART (1925 – 2013)**

**INVENTION DE LA SOURIS (BREVET EN 1967)**



# 1968

## DOUGLAS ENGELBART (1925 – 2013)

### PREMIÈRE DÉMO (EN VISIO ET STREAM EN DIRECT, SVP)

- visio conférence (Internet, c'est 15 à 20 ans plus tard),
- Présentation d'outils collaboratifs à distance (Google docs, c'est 40 ans plus tard)



# **NAISSANCE DU WEB**

1989

## TIM BERNER LEE (1955-)

Inventeur et concepteur des outils du WEB

- <https://www.w3.org/History/1989/proposal.html>, <https://home.cern/science/computing/birth-web>
- langage HTML
- protocole HTTP
- logiciels associés
  - serveur (httpd),
  - navigateur web (www)

C'est l'ouverture du code (licence libre) qui a fortement contribué à la réussite du web

<http://info.cern.ch/hypertext/README.html>

Mais c'est tout de même un travail d'équipe

# 1994

## LE VRAI DÉMARRAGE

- Création du W3C (Tim Berner Lee)
- Normalisation des outils du web: HTML, CSS, HTTP...