

R102

DÉVELOPPEMENT D'INTERFACES WEB

Jean Carle jean.carle@univ-lille.fr

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 \Rightarrow 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

IGO R1.08 Base de la gestion des organisations

Comm R1.11 Base de la communication

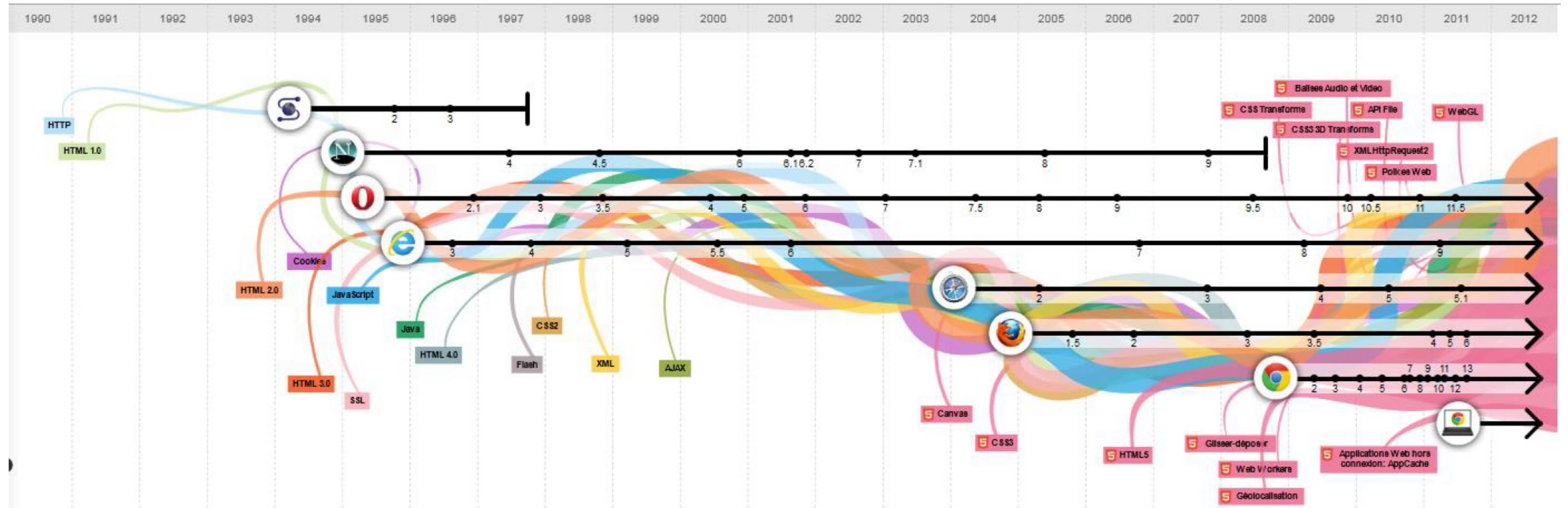
Web R1.02 Base du web

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 make and follow links between documents on microfiche.
- 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 Indeterminate." 20th National Conference, New York, Association for Computing Machinery.
- 1968: Douglas Engelbart demonstrates Online System (NLS).
- 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).

- 1980: While consulting for CERN, Tim Berners-Lee writes a program, "Enquire-Within-Upon-Everything", which allows links to be made between arbitrary nodes.

- May: Tim Berners-Lee publishes version 2 of "Information Management: A proposal."
- End 1990: Development begins for first browser (called "WorldWideWeb"), editor, server, and line-mode browser. Culminates in first Web client-server communication over Internet in December 1990.
- 1989: Mar: Tim Berners-Lee circulates "Information Management: A Proposal" for comments at CERN.

- 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.

- Mark Andreessen and colleagues leave NCSA to form Mosaic Communications Corp., which later became Netscape.
- Traditional dial-up systems (CompuServe, AOL, Prodigy) begin to provide Internet access.
- Jan: Number of browsers increases; includes Mosaic, Erwise, Viola, and Samba.
- 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.
- Nov: At a Newcastle, U.K. conference, Tim Berners-Lee discusses the future of the Web with MIT's David Gifford, who suggests that Tim contact Michael Dertouzos.

W3C

- Feb: Tim Berners-Lee meets Michael Dertouzos in Zurich to discuss possibility of starting new organization at MIT.
- Apr: Alan Kotok, then at DEC, visits CERN to discuss creation of Consortium.
- 1 Oct: W3C created.

- Apr: INRIA becomes W3C Host in Europe.
- Jun: W3C holds first Workshop, on Content Rating; leads to PICS.

- Jun: In response to "Peabody meeting" W3C forms Process ERB.
- Sep: Keio University becomes W3C Host in Asia.

- Nov: W3C launches Offices program.

- W3C Creates Advisory Board (AB).

- Jul: W3C charts 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
- Hypertext Markup Language (HTML)
- Style

- Math
- Extensible Markup Language (XML)

- Document Object Model (DOM)
- Patent Policy
- Privacy
- Synchronized Multimedia
- Web Accessibility Initiative (WAI)

- Internationalization

- Voice Browser

- URI

- Device Independence
- Semantic Web
- XML Key Management
- Quality Assurance

- Multimodal Interaction
- Web Services

- XForms

- Compound Document Formats

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+
---	----	----	-----	--------	---------	---------	--------------	--------------	--------------	-------------	-------------	-------------	------

LES GRANDES IDÉES QUI ONT MENÉ AU WEB MODERNE

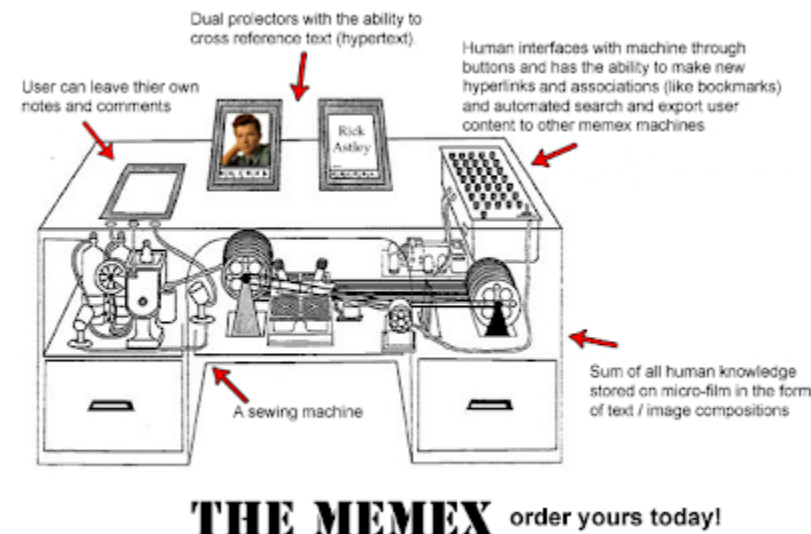
1945

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
- **1965** : Inventeur du mot "*hypertexte*" (et la de lecture non linéaire)



1968

DOUGLAS ENGELBART (1925 — 2013)

INVENTION DE LA SOURIS (BREVET EN 1967)

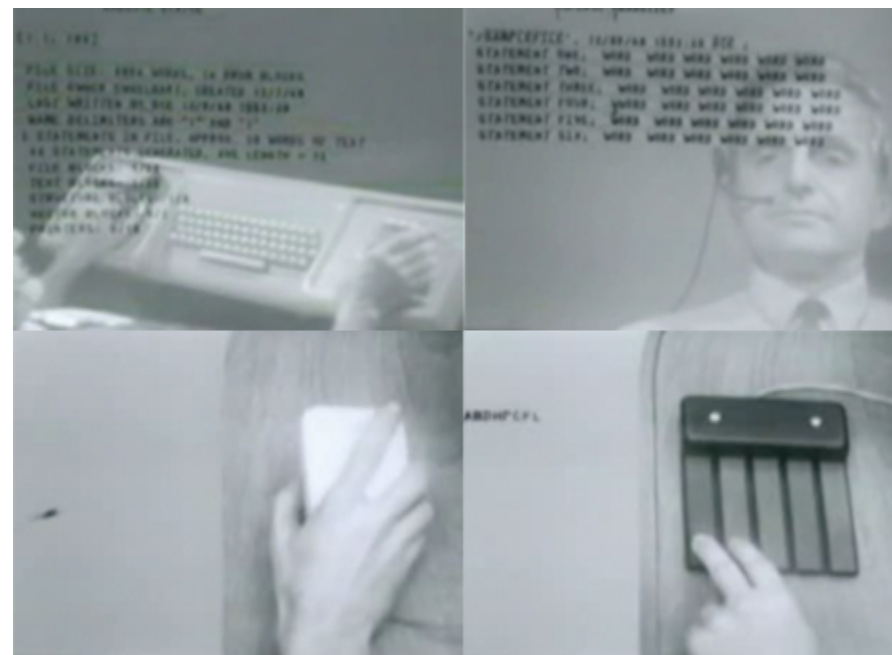


1968

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...