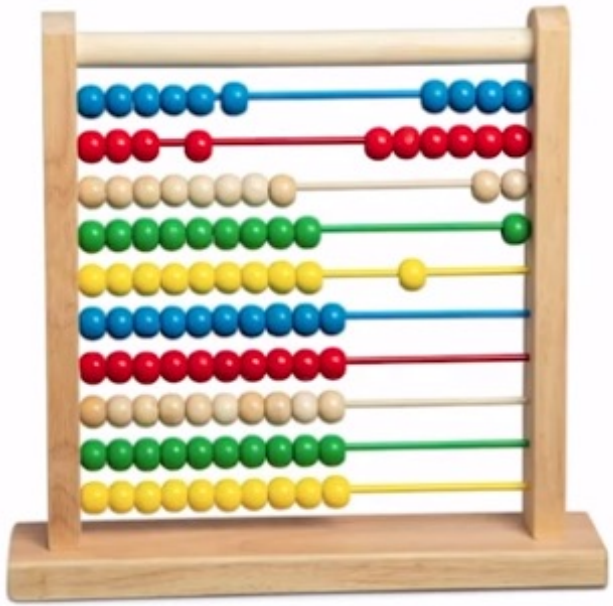
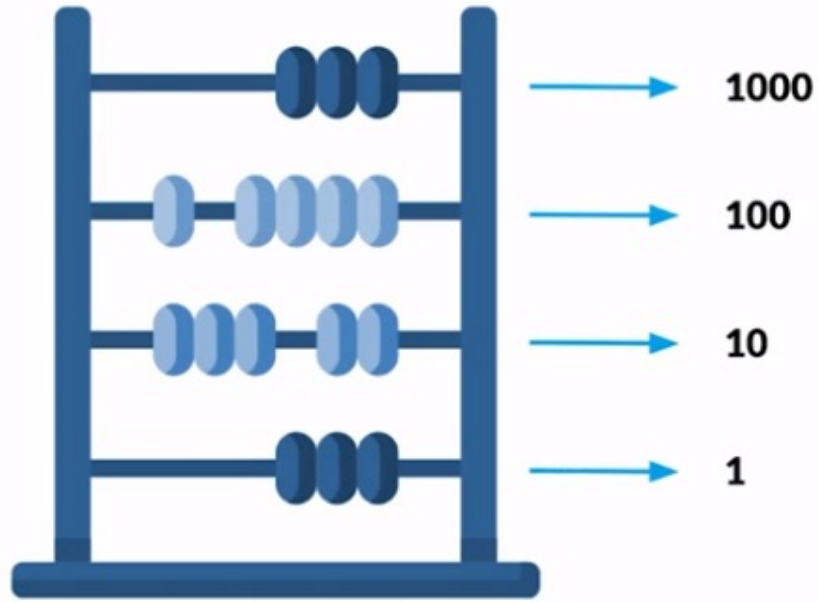
HISTORIA DE INTERNET

Ábaco

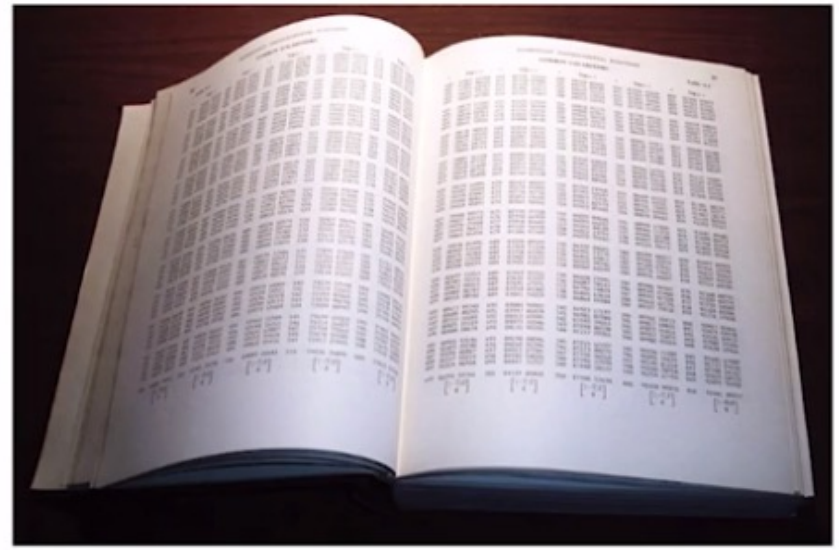


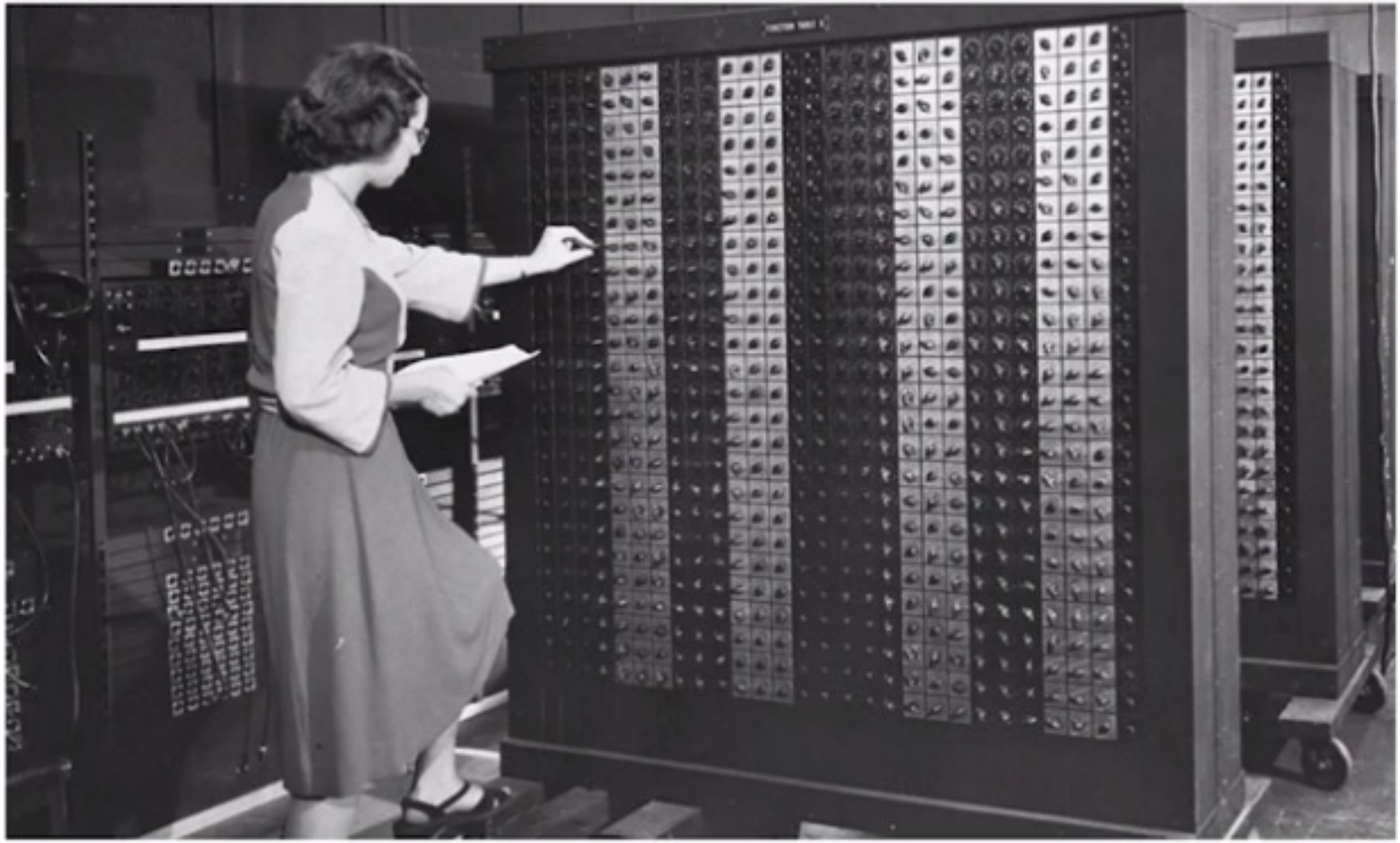


Computadoras humanas

Libros con cálculos

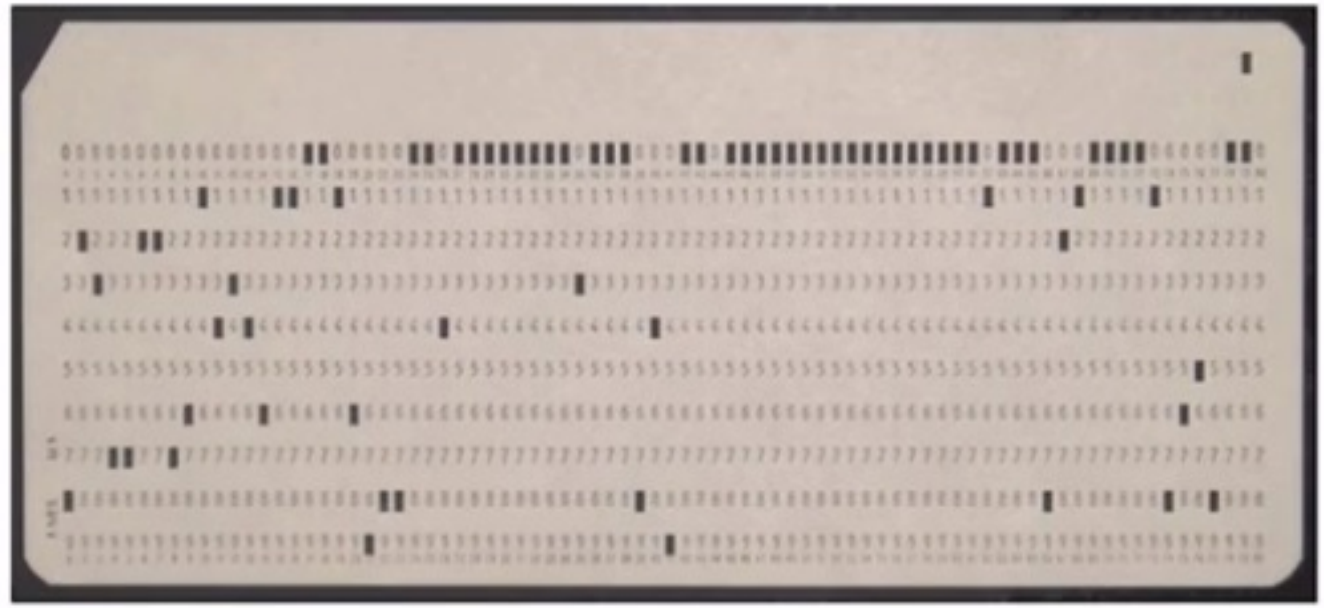
(precomputation table)





Cálculo balístico para la guerra

Tarjetas perforadas

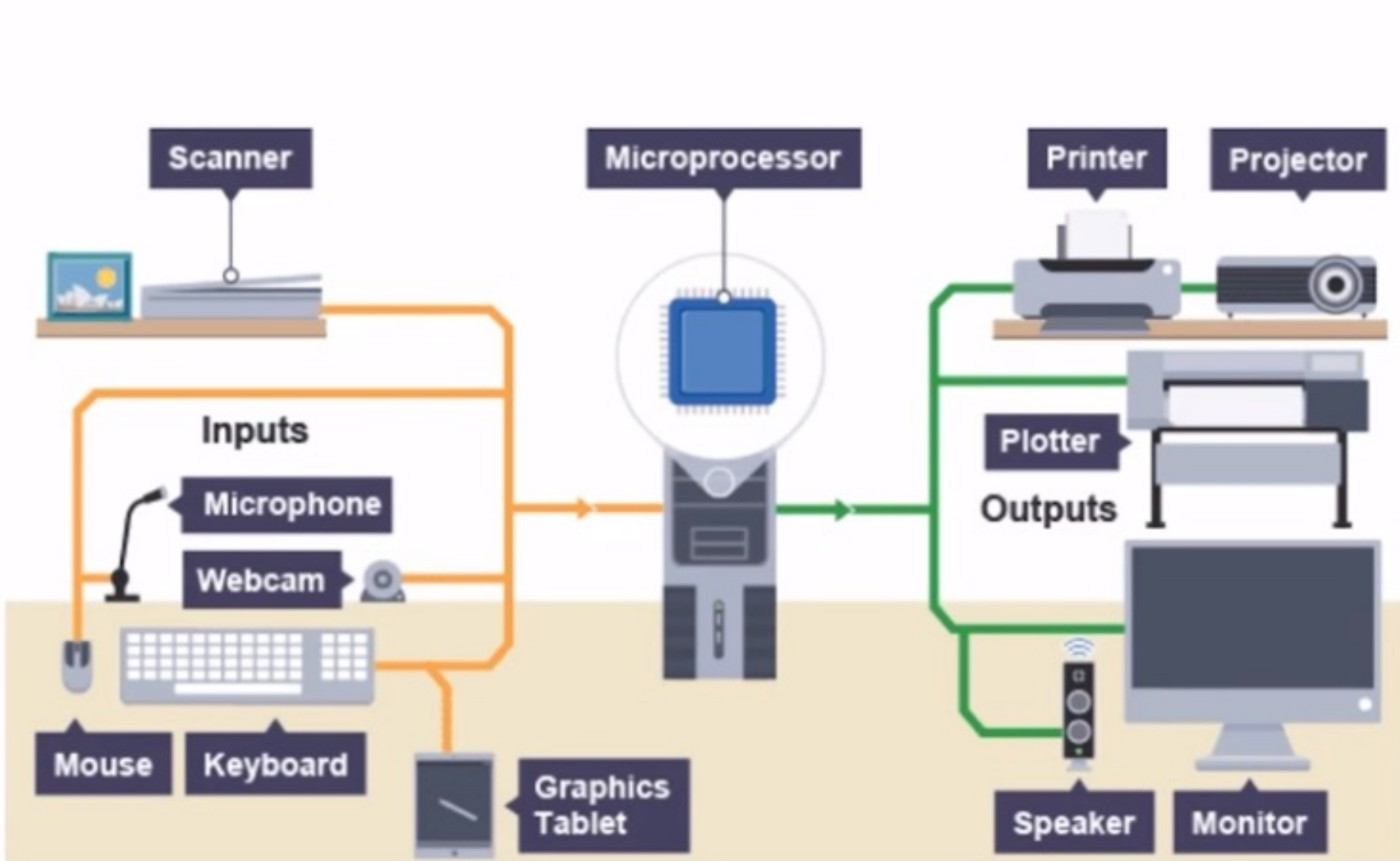


Machine code

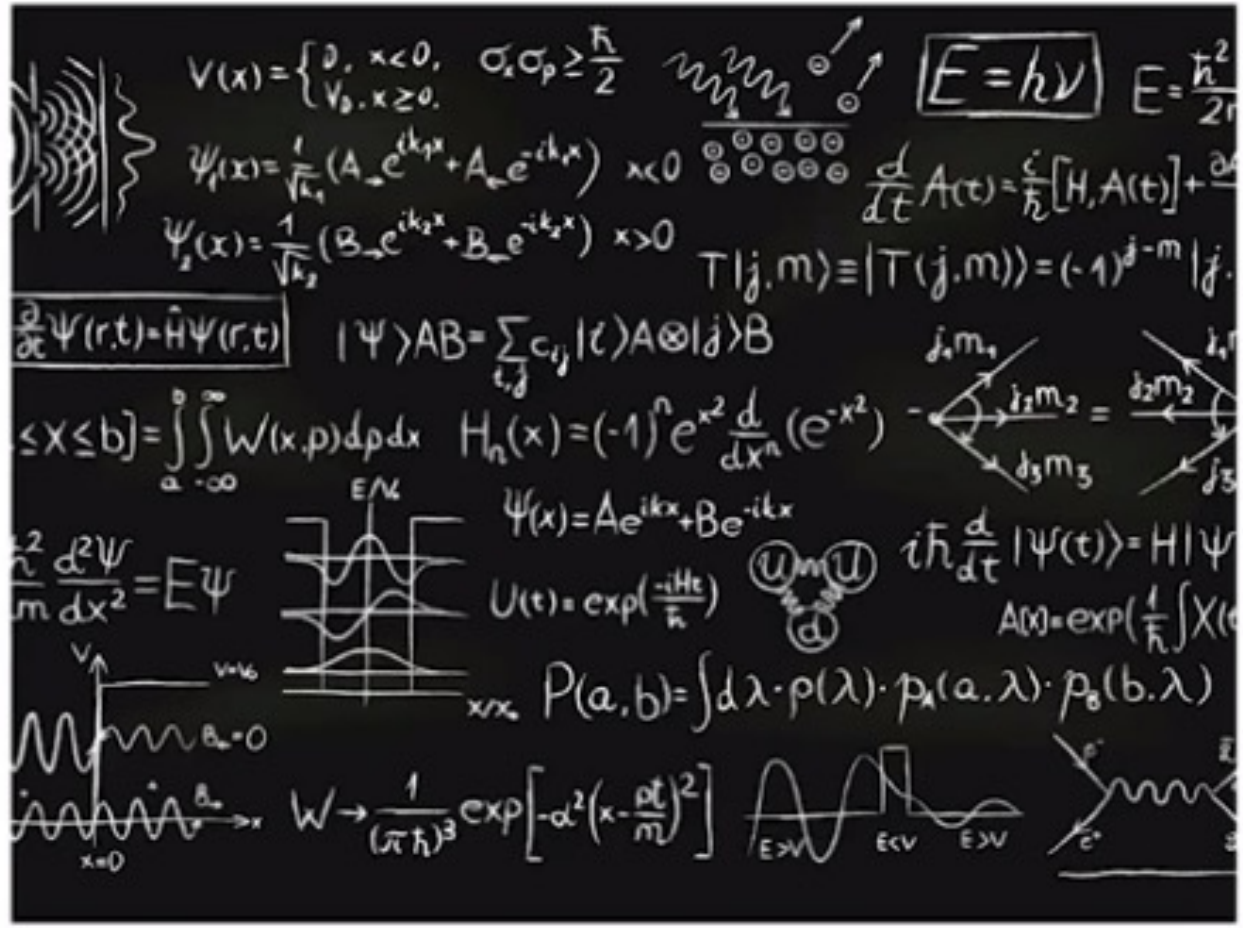
Primeros lenguajes de programación

Inputs - Outputs


Entrada
(Input)
Proceso
Salida
(Output)


Scanner
Microprocessor
Printer
Projector
Inputs
Microphone
Webcam
Plotter
Outputs
Mouse
Keyboard
Graphics Tablet
Speaker
Monitor

Muchos cálculos



Binario

Es un sistema de conteo

0, 1, 2, 3, 4, 5, 6, 7, 8, 9

123,456,789

Centena de millón
Decena de millón
Unidad de millón
Centena de mil
Decena de mil
Unidad de mil
Centena
Decena
Unidad

3

20

1,230

0 y 1

Machine Code es un lenguaje binario. El sistema binario es básicamente un sistema de conteo.
La computadora solo entiende en ceros y unos.

128, 64, 32, 16, 8, 4, 2, 1

0 0 0 0 0 0 0 1 = 1

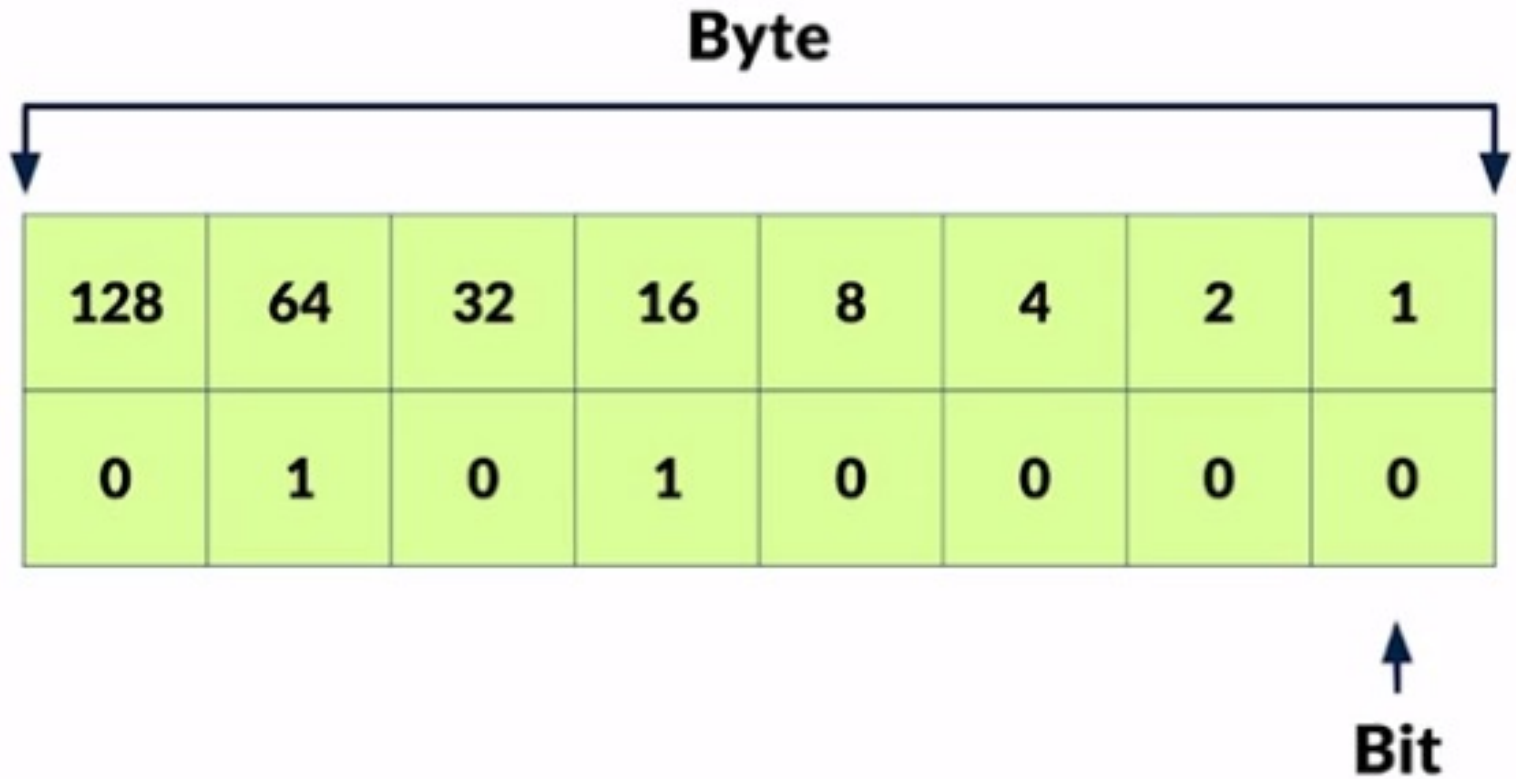
0 0 0 0 0 0 1 0 = 2

0 0 0 0 0 0 1 1 = 3

0 0 0 1 0 1 0 0 = 20

1 1 1 1 1 1 1 1 = 255

Bit y Bytes


Byte
128
64
32
16
8
4
2
1
0
1
0
1
0
0
0
0
Bit

Transistores

1st generation

2nd generation

167 transistors
(74181 ALU)

3rd generation

3510 transistors

2,600,000,000 transistors

4th generation

Transistores

ON	OFF
True	False
1	0

Pero entonces,
¿cómo con bytes puedo representar letras, números, caracteres especiales, etc.?

ASCII

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85

V	W	X	Y	Z
86	87	88	89	90

https://www.ascii-code.com/

El código ASCII

sigla en inglés de American Standard Code for Information Interchange
(Código Estadounidense Estándar para el Intercambio de Información)

www.elcodigoascii.com.ar

Caracteres de control ASCII

DEC	HEX	Simbolo ASCII	
00	00h	NULL	(carácter nulo)
01	01h	SOH	(inicio encabezado)
02	02h	STX	(inicio texto)
03	03h	ETX	(fin de texto)
04	04h	EOT	(fin transmisión)
05	05h	ENQ	(enquiry)
06	06h	ACK	(acknowledgement)
07	07h	BEL	(timbre)
08	08h	BS	(retroceso)
09	09h	HT	(tab horizontal)
10	0Ah	LF	(salto de linea)
11	0Bh	VT	(tab vertical)
12	0Ch	FF	(form feed)
13	0Dh	CR	(retorno de carro)
14	0Eh	SO	(shift Out)
15	0Fh	SI	(shift In)
16	10h	DLE	(data link escape)
17	11h	DC1	(device control 1)
18	12h	DC2	(device control 2)
19	13h	DC3	(device control 3)
20	14h	DC4	(device control 4)
21	15h	NAK	(negative acknowle.)
22	16h	SYN	(synchronous idle)
23	17h	ETB	(end of trans. block)
24	18h	CAN	(cancel)
25	19h	EM	(end of medium)
26	1Ah	SUB	(substitute)
27	1Bh	ESC	(escape)
28	1Ch	FS	(file separator)
29	1Dh	GS	(group separator)
30	1Eh	RS	(record separator)
31	1Fh	US	(unit separator)
127	20h	DEL	(delete)

Caracteres ASCII imprimibles

DEC	HEX	Simbolo	DEC	HEX	Simbolo	DEC	HEX	Simbolo
32	20h	espacio	64	40h	@	96	60h	`
33	21h	!	65	41h	A	97	61h	a
34	22h	"	66	42h	B	98	62h	b
35	23h	#	67	43h	C	99	63h	c
36	24h	$	68	44h	D	100	64h	d
37	25h	%	69	45h	E	101	65h	e
38	26h	&	70	46h	F	102	66h	f
39	27h	'	71	47h	G	103	67h	g
40	28h	(	72	48h	H	104	68h	h
41	29h	)	73	49h	I	105	69h	i
42	2Ah	*	74	4Ah	J	106	6Ah	j
43	2Bh	+	75	4Bh	K	107	6Bh	k
44	2Ch	,	76	4Ch	L	108	6Ch	l
45	2Dh	-	77	4Dh	M	109	6Dh	m
46	2Eh	.	78	4Eh	N	110	6Eh	n
47	2Fh	/	79	4Fh	O	111	6Fh	o
48	30h	0	80	50h	P	112	70h	p
49	31h	1	81	51h	Q	113	71h	q
50	32h	2	82	52h	R	114	72h	r
51	33h	3	83	53h	S	115	73h	s
52	34h	4	84	54h	T	116	74h	t
53	35h	5	85	55h	U	117	75h	u
54	36h	6	86	56h	V	118	76h	v
55	37h	7	87	57h	W	119	77h	w
56	38h	8	88	58h	X	120	78h	x
57	39h	9	89	59h	Y	121	79h	y
58	3Ah	:	90	5Ah	Z	122	7Ah	z
59	3Bh	;	91	5Bh	[	123	7Bh	{
60	3Ch	<	92	5Ch	\	124	7Ch	|
61	3Dh	=	93	5Dh	]	125	7Dh	}
62	3Eh	>	94	5Eh	^	126	7Eh	~
63	3Fh	?	95	5Fh	_			

elCodigoASCII.com.ar

ASCII extendido

DEC	HEX	Simbolo	DEC	HEX	Simbolo	DEC	HEX	Simbolo	DEC	HEX	Simbolo
128	80h	Ç	160	A0h	á	192	C0h	└	224	E0h	Ó
129	81h	ü	161	A1h	í	193	C1h	┴	225	E1h	ß
130	82h	é	162	A2h	ó	194	C2h	┬	226	E2h	Ô
131	83h	â	163	A3h	ú	195	C3h	├	227	E3h	Ò
132	84h	ä	164	A4h	ñ	196	C4h	─	228	E4h	õ
133	85h	à	165	A5h	Ñ	197	C5h	┼	229	E5h	Õ
134	86h	å	166	A6h	ª	198	C6h	ã	230	E6h	µ
135	87h	ç	167	A7h	º	199	C7h	Ã	231	E7h	þ
136	88h	ê	168	A8h	¿	200	C8h	╚	232	E8h	Þ
137	89h	ë	169	A9h	®	201	C9h	╔	233	E9h	Ú
138	8Ah	è	170	AAh	¬	202	CAh	╩	234	EAh	Û
139	8Bh	ï	171	ABh	½	203	CBh	╦	235	EBh	Ù
140	8Ch	î	172	ACh	¼	204	CCh	╠	236	ECh	ý
141	8Dh	ì	173	ADh	¡	205	CDh	═	237	EDh	Ý
142	8Eh	Ä	174	AEh	«	206	CEh	╬	238	EEh	¯
143	8Fh	Å	175	AFh	»	207	CFh	¤	239	EFh	´
144	90h	É	176	B0h	░	208	D0h	ð	240	F0h	
145	91h	æ	177	B1h	▒	209	D1h	Ð	241	F1h	±
146	92h	Æ	178	B2h	▓	210	D2h	Ê	242	F2h	‗
147	93h	ô	179	B3h	│	211	D3h	Ë	243	F3h	¾
148	94h	ò	180	B4h	┤	212	D4h	È	244	F4h	¶
149	95h	ò	181	B5h	Á	213	D5h	ı	245	F5h	§
150	96h	û	182	B6h	Â	214	D6h	Í	246	F6h	÷
151	97h	ù	183	B7h	À	215	D7h	Î	247	F7h	¸
152	98h	ÿ	184	B8h	©	216	D8h	Ï	248	F8h	°
153	99h	Ö	185	B9h	╣	217	D9h	┘	249	F9h	¨
154	9Ah	Ü	186	BAh	║	218	DAh	┌	250	FAh	·
155	9Bh	ø	187	BBh	╗	219	DBh	█	251	FBh	¹
156	9Ch	£	188	BCh	╝	220	DCh	▄	252	FCh	³
157	9Dh	Ø	189	BDh	¢	221	DDh	¦	253	FDh	²
158	9Eh	×	190	BEh	¥	222	DEh	Ì	254	FEh	■
159	9Fh	ƒ	191	BFh	┐	223	DFh	▀	255	FFh	

161 72 111 108 97 33

¡Hola!

161 72 111 108 97 33

10100001
01001000
01101111
01101100
01100001
00100001

¡Hola!

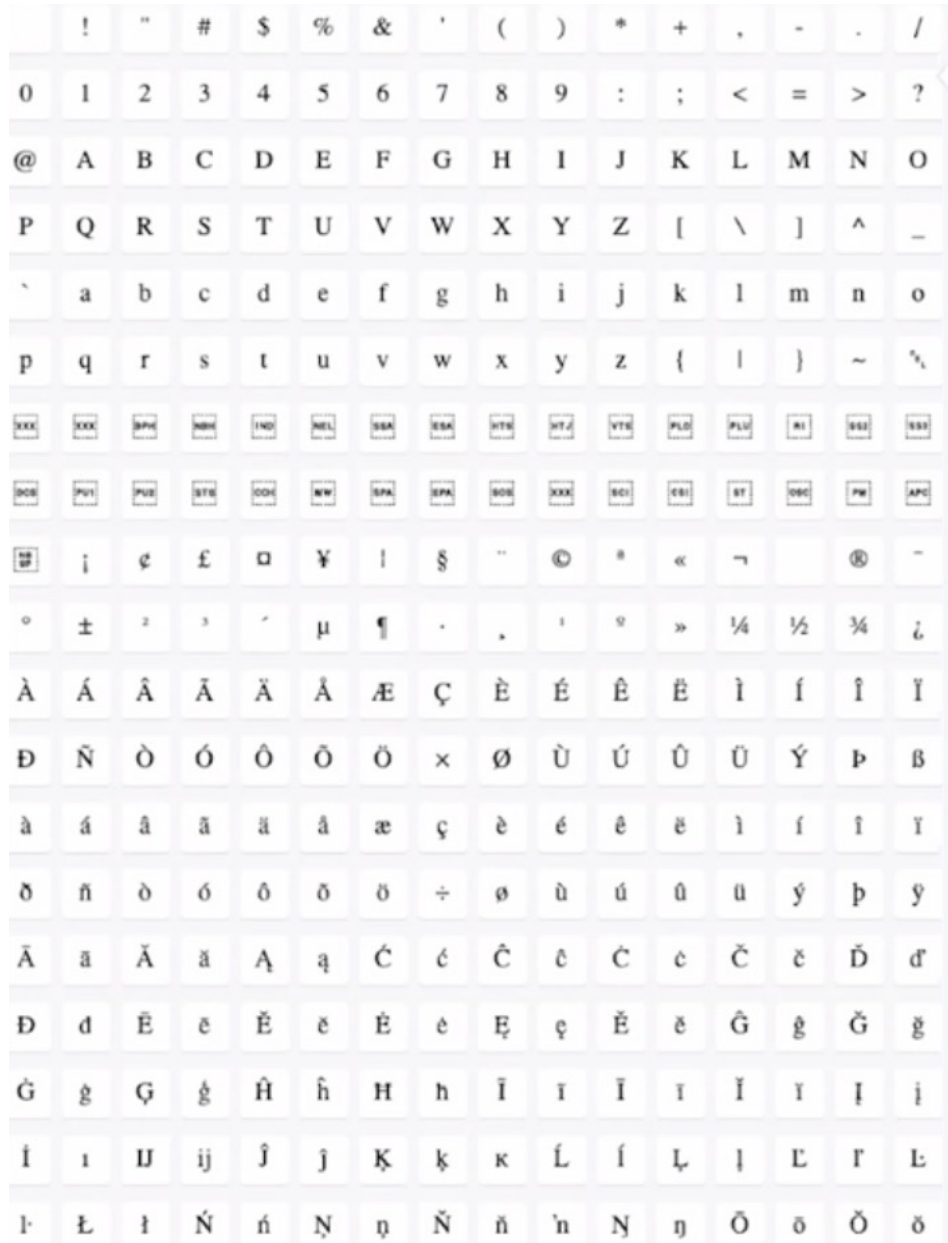
161 72 111 108 97 33

10100001
01001000
01101111
01101100
01100001
00100001

UNICODE

El término Unicode proviene de los tres objetivos perseguidos: Universalidad, Uniformidad y Unicidad.

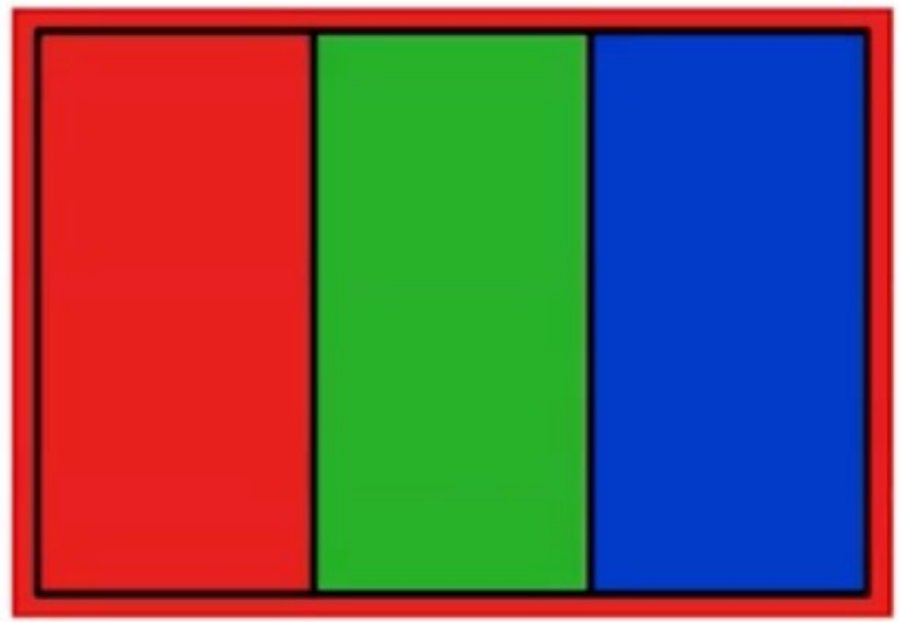
https://home.unicode.org/



Cómo funcionan los colores


JS

RGB



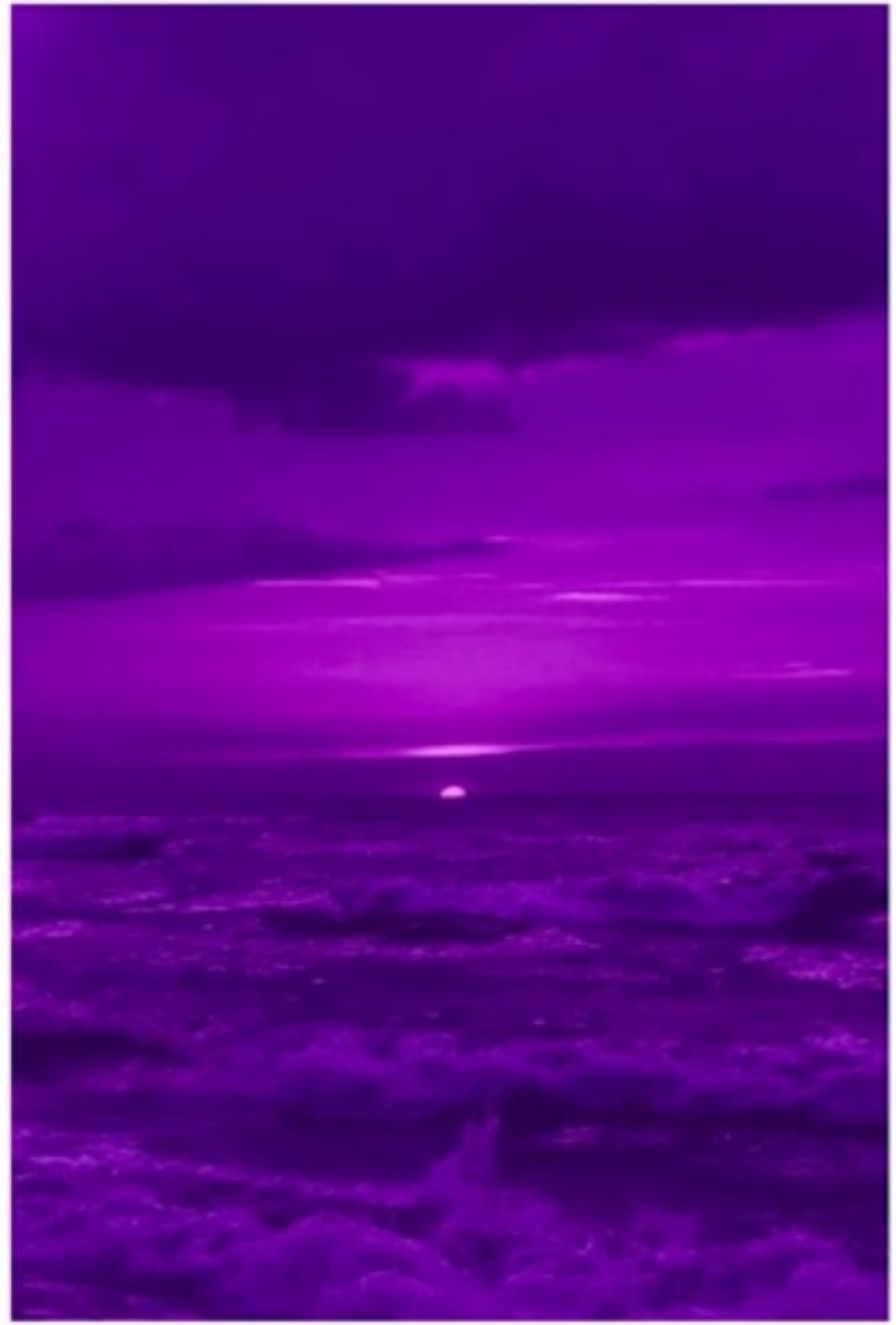
3 Subpixels

Black	(0,0,0)
White	(255,255,255)
Red	(255,0,0)
Lime	(0,255,0)
Blue	(0,0,255)
Yellow	(255,255,0)
Cyan / Aqua	(0,255,255)
Magenta / Fuchsia	(255,0,255)
Silver	(192,192,192)
Gray	(128,128,128)
Maroon	(128,0,0)
Olive	(128,128,0)
Green	(0,128,0)
Purple	(128,0,128)
Teal	(0,128,128)
Navy	(0,0,128)

Plum Purple

R: 178
G: 80
B: 228

R: 178 = 10110010
G: 80 = 01010000
B: 228 = 11100100



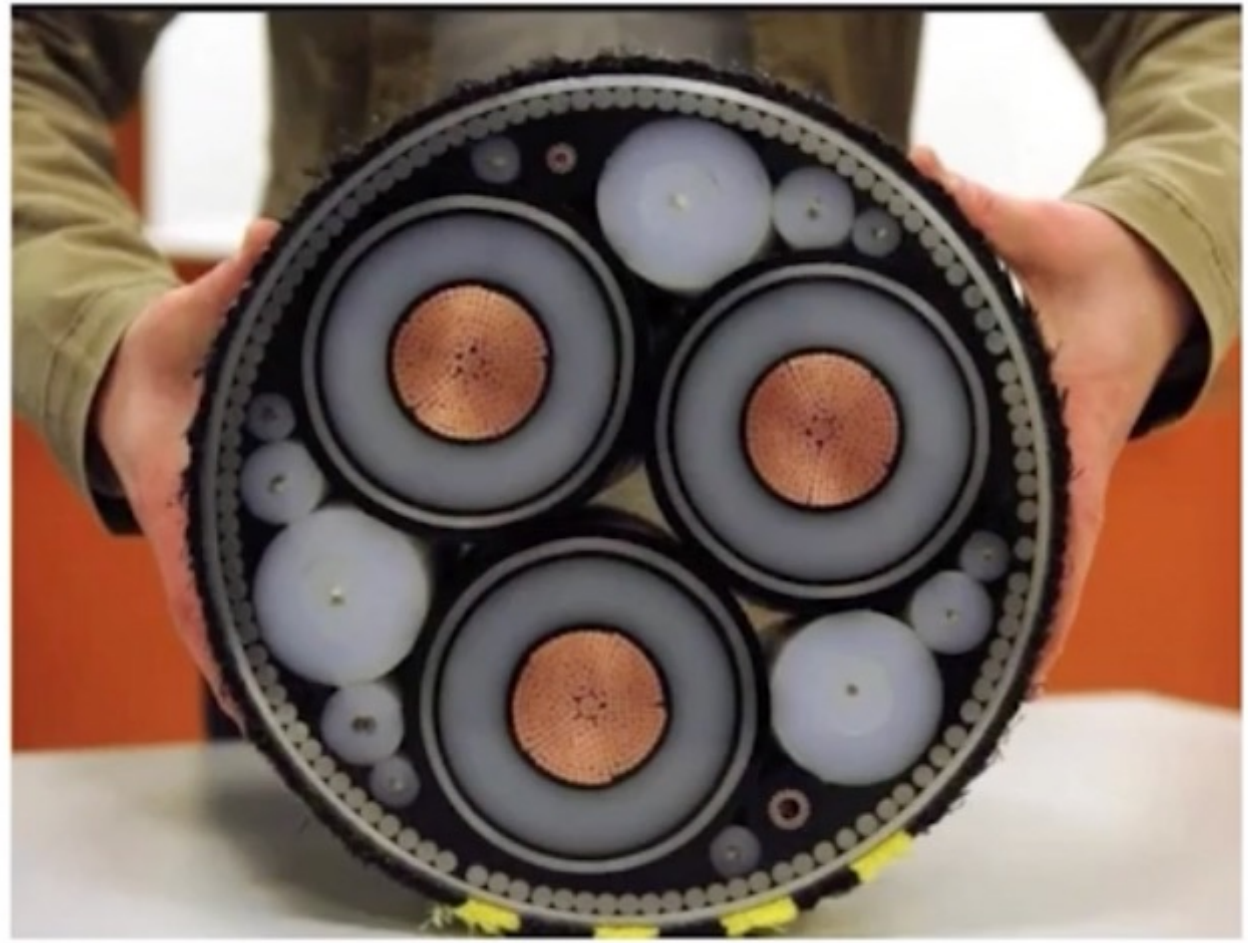
Protocolos

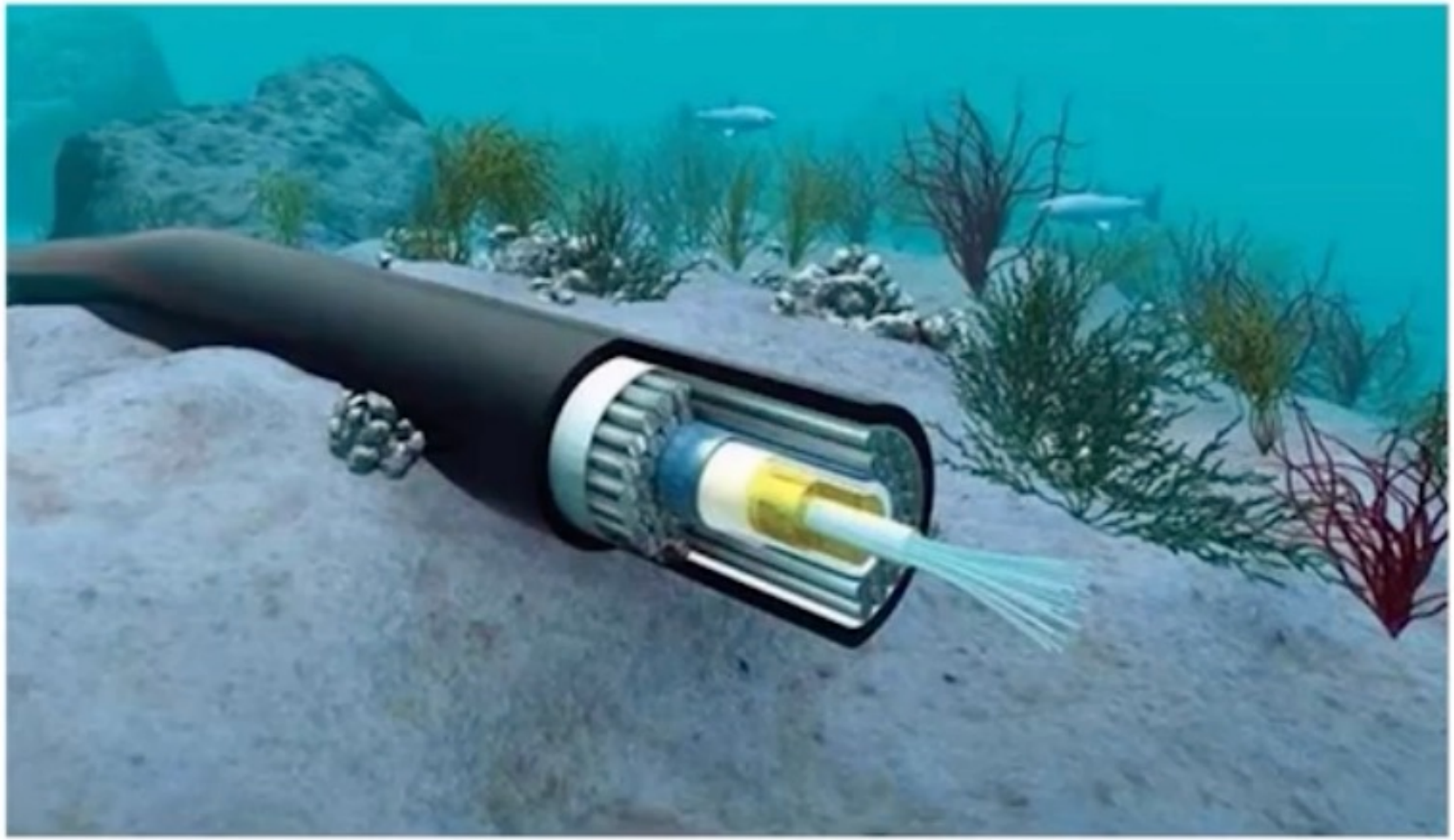
TCP / IP

(Transmission Control Protocol / Internet Protocol)

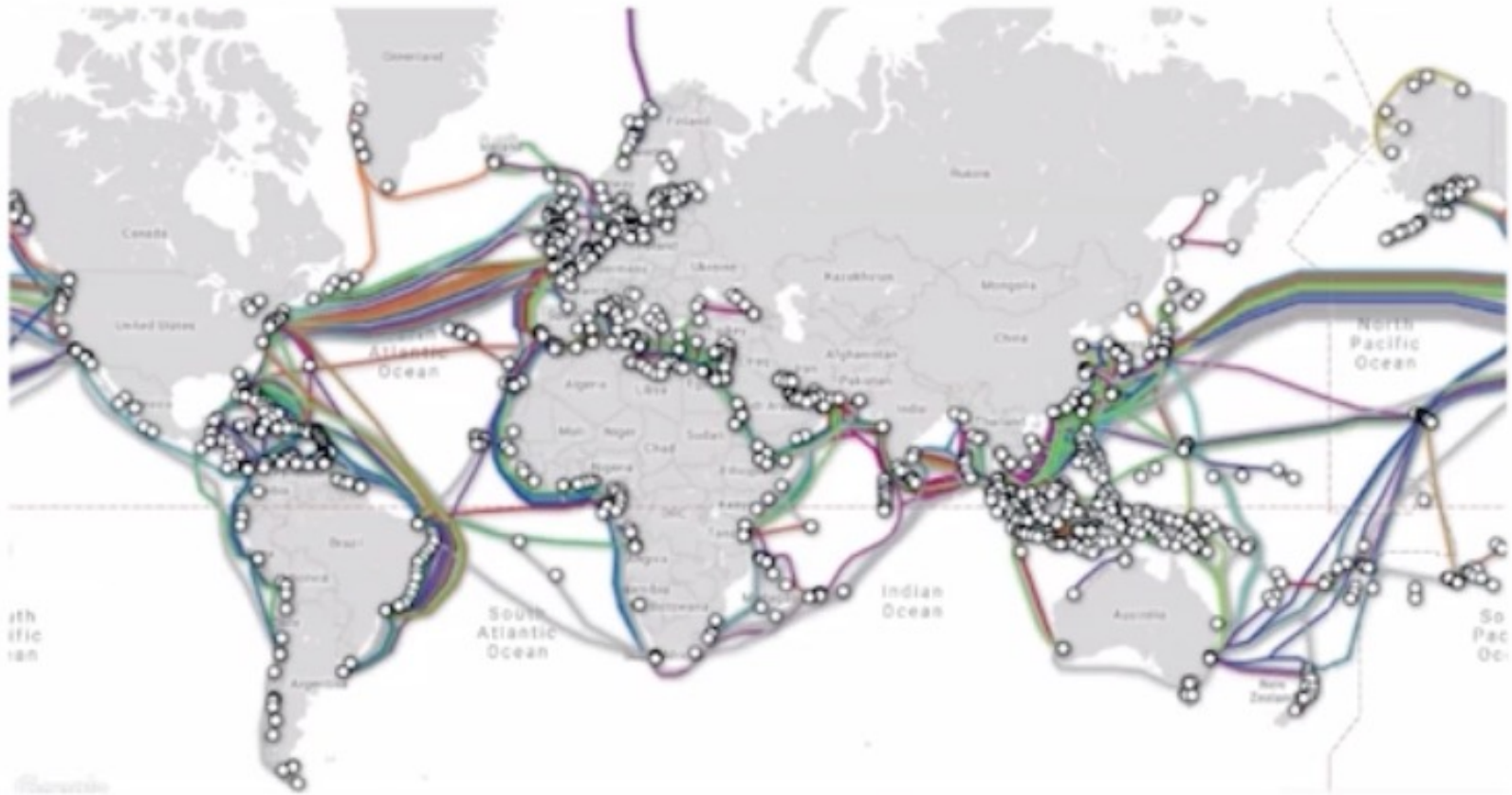
APPLICATION	HTTP / FTP
TRANSPORT	TCP, UDP
NETWORK	IP, ROUTERS
DATA LINK	ETHERNET, SWITCHES
PHYSICAL	CABLES

De dónde viene el Internet?





Internet backbone



“

Internet es una abreviación de **Internetworking**, y se creó en los años 70’s para referirse a los cables físicos y las computadoras que se conectan entre sí.

”

ARPANET

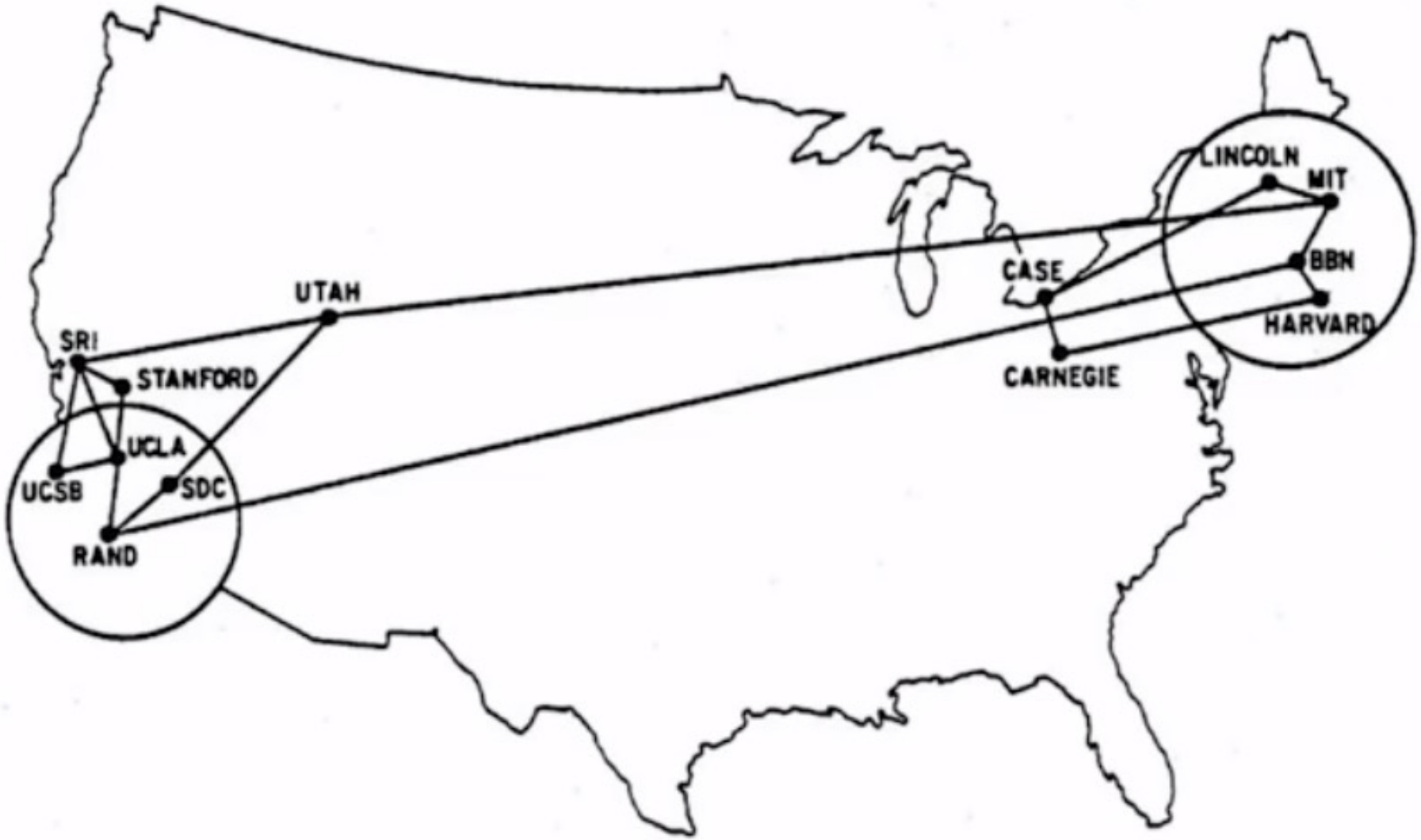
(Advanced Research Projects Agency NETwork)

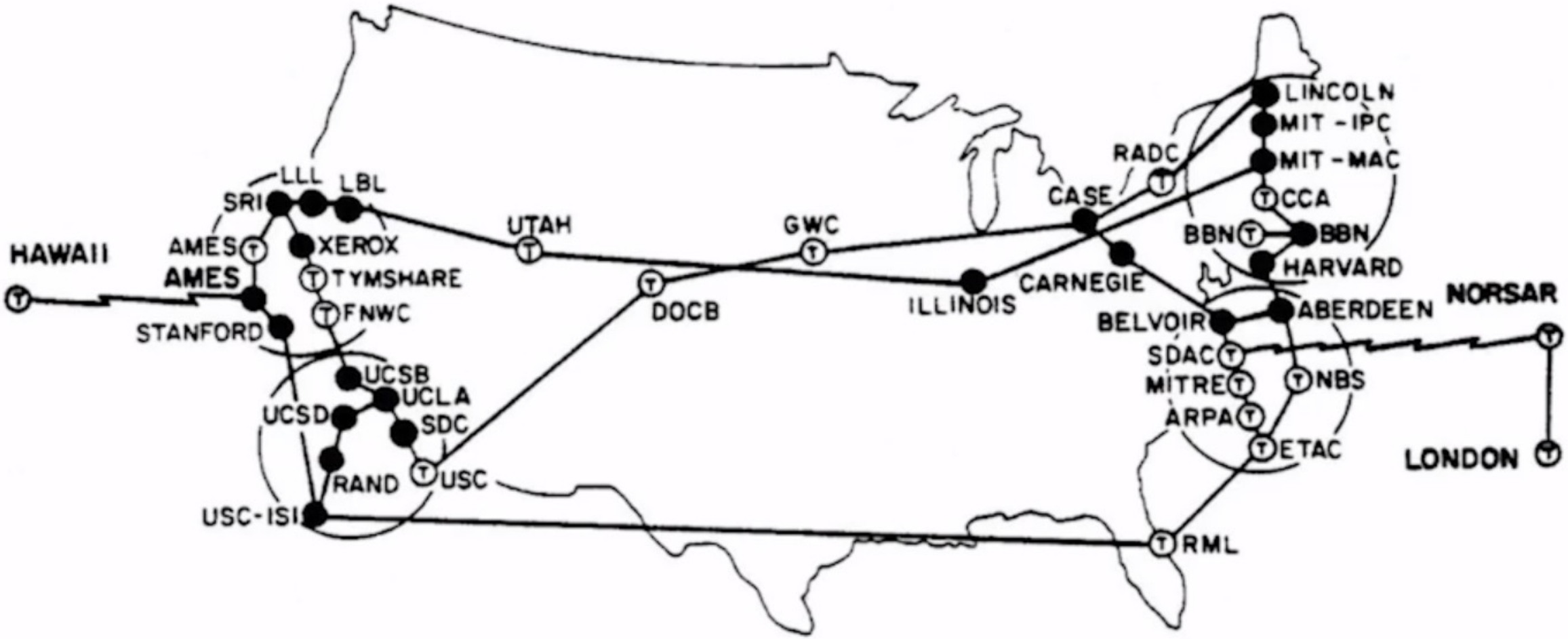
Fue un proyecto de investigación académico.

The ARPANET in December 1969

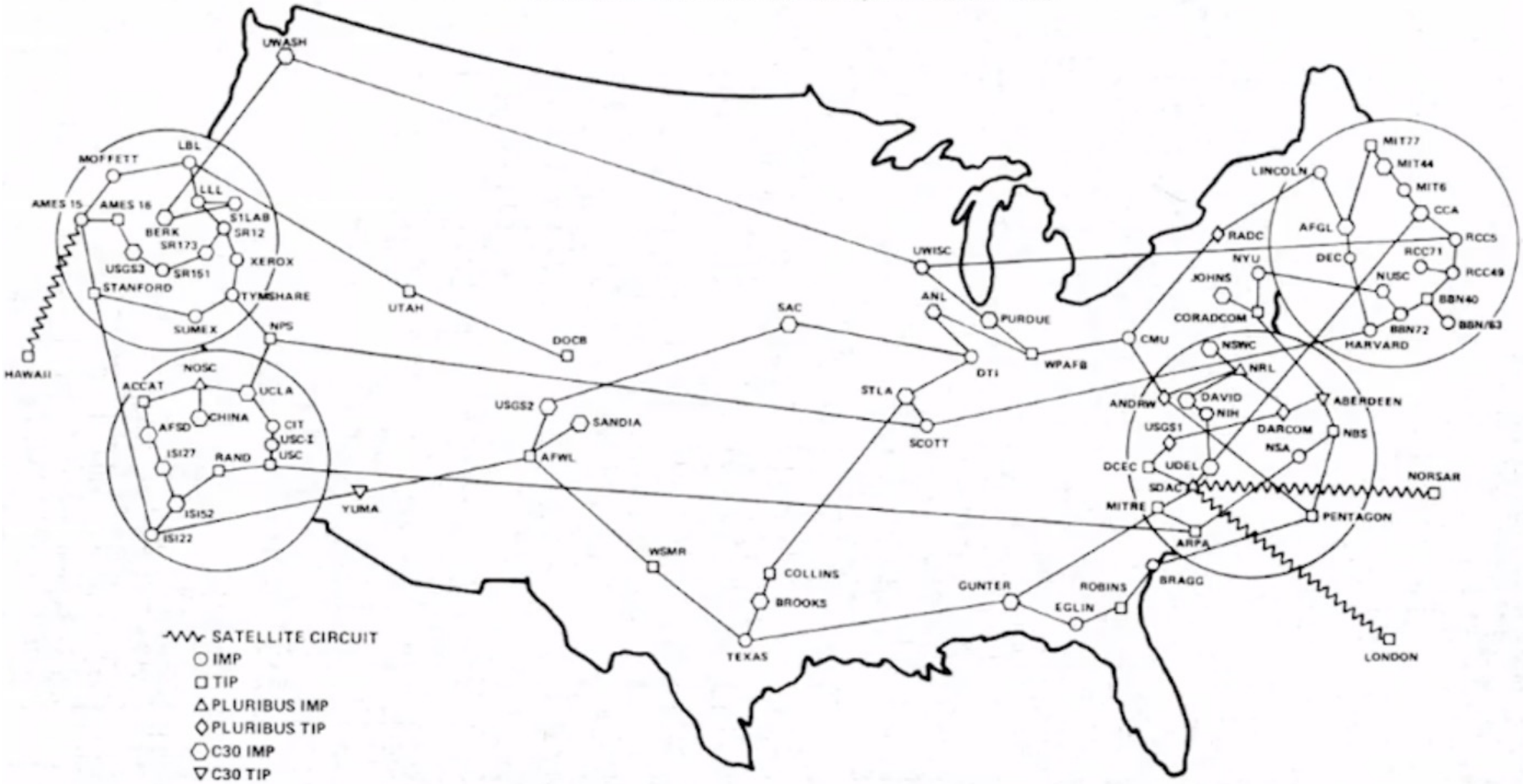
El primer mensaje

El primer mensaje de una computadora a otra estando conectadas tenía que ser “Login” pero solo llegó “Lo”.


LINCOLN
MIT
BBN
HARVARD
CASE
CARNEGIE
UTAH
SRI
STANFORD
UCLA
UCSB
SDC
RAND

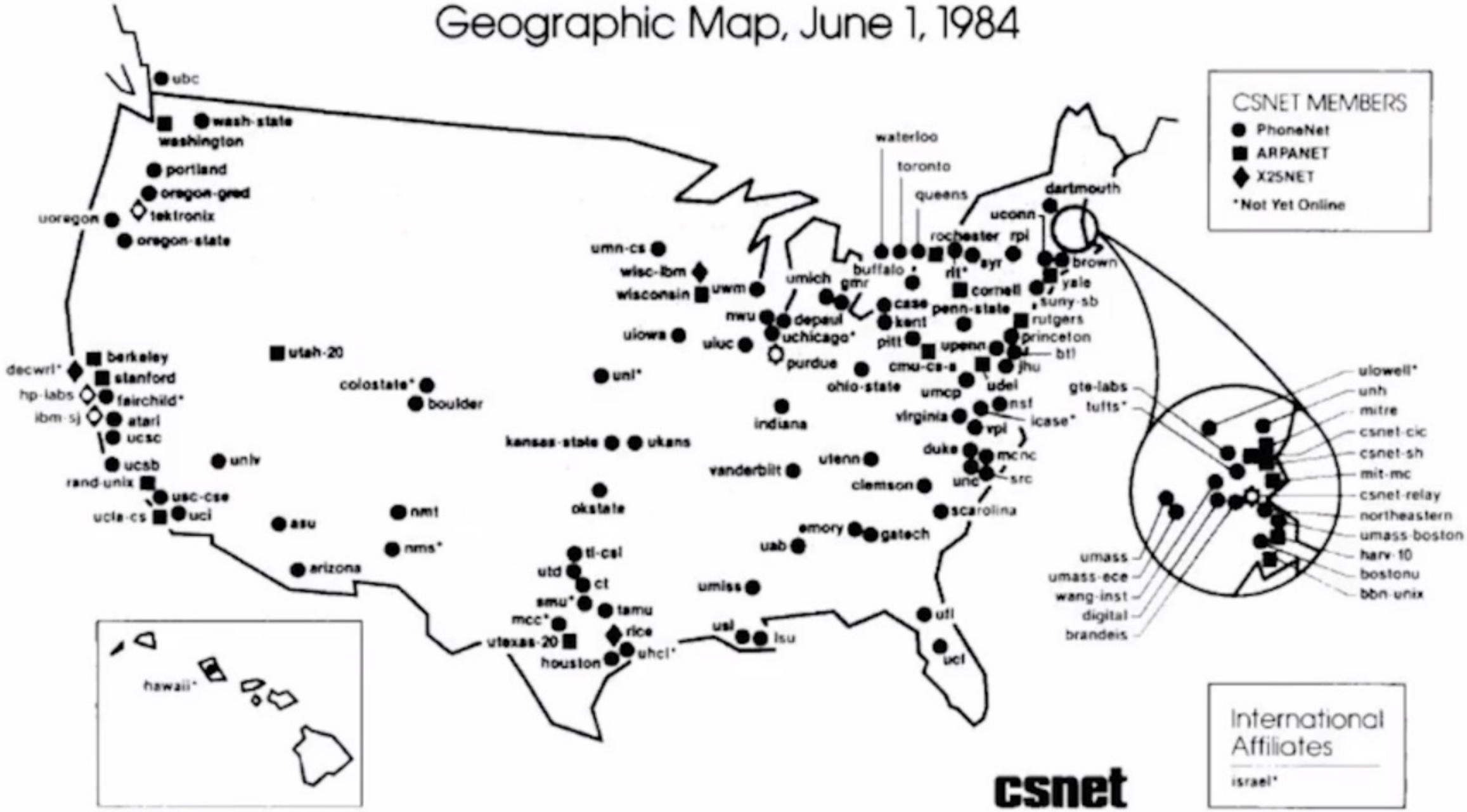

LLL
LBL
SRI
AMES
XEROX
TYMSHARE
FNWC
HAWAII
AMES
STANFORD
UCSB
UCLA
UCSD
SDC
RAND
USC
USC-ISI
UTAH
GWC
DOCB
ILLINOIS
CASE
RADC
CARNEGIE
LINCOLN
MIT - IPC
MIT - MAC
CCA
BBN
BBN
HARVARD
ABERDEEN
BELVOIR
SDAC
MITRE
ARPA
NBS
ETAC
NORSAR
LONDON
RML

ARPANET GEOGRAPHIC MAP, FEBRUARY 1982



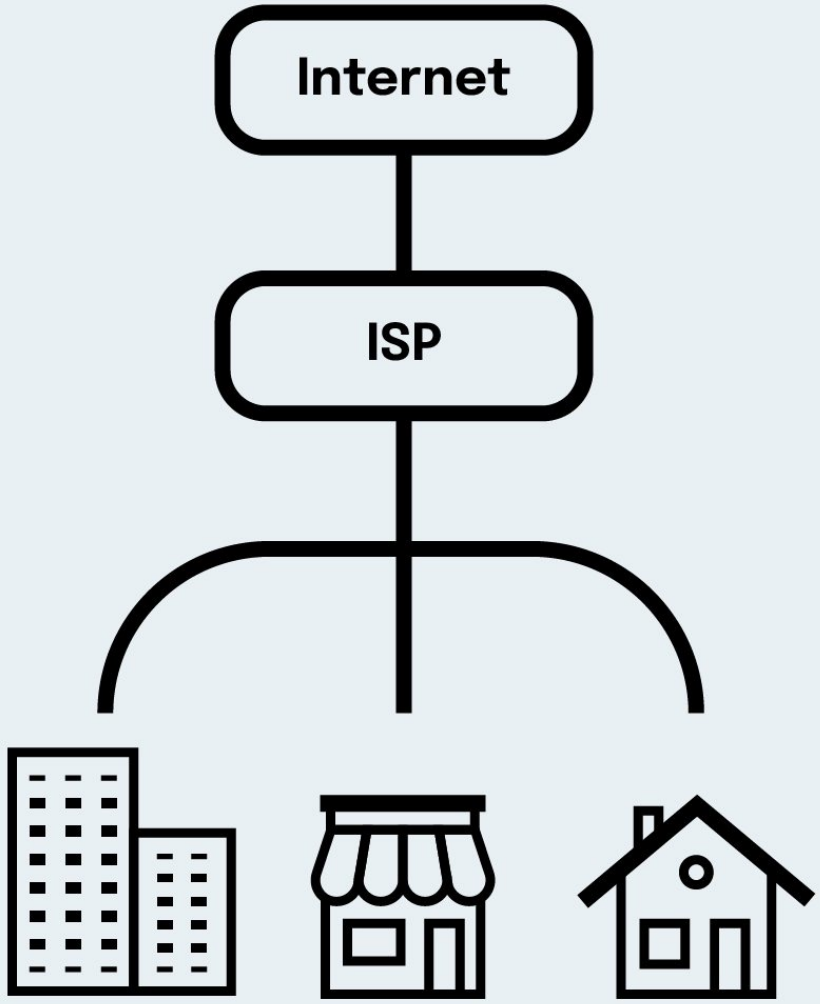
(NOTE: THIS MAP DOES NOT SHOW ARPA'S EXPERIMENTAL SATELLITE CONNECTIONS)
NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

Geographic Map, June 1, 1984

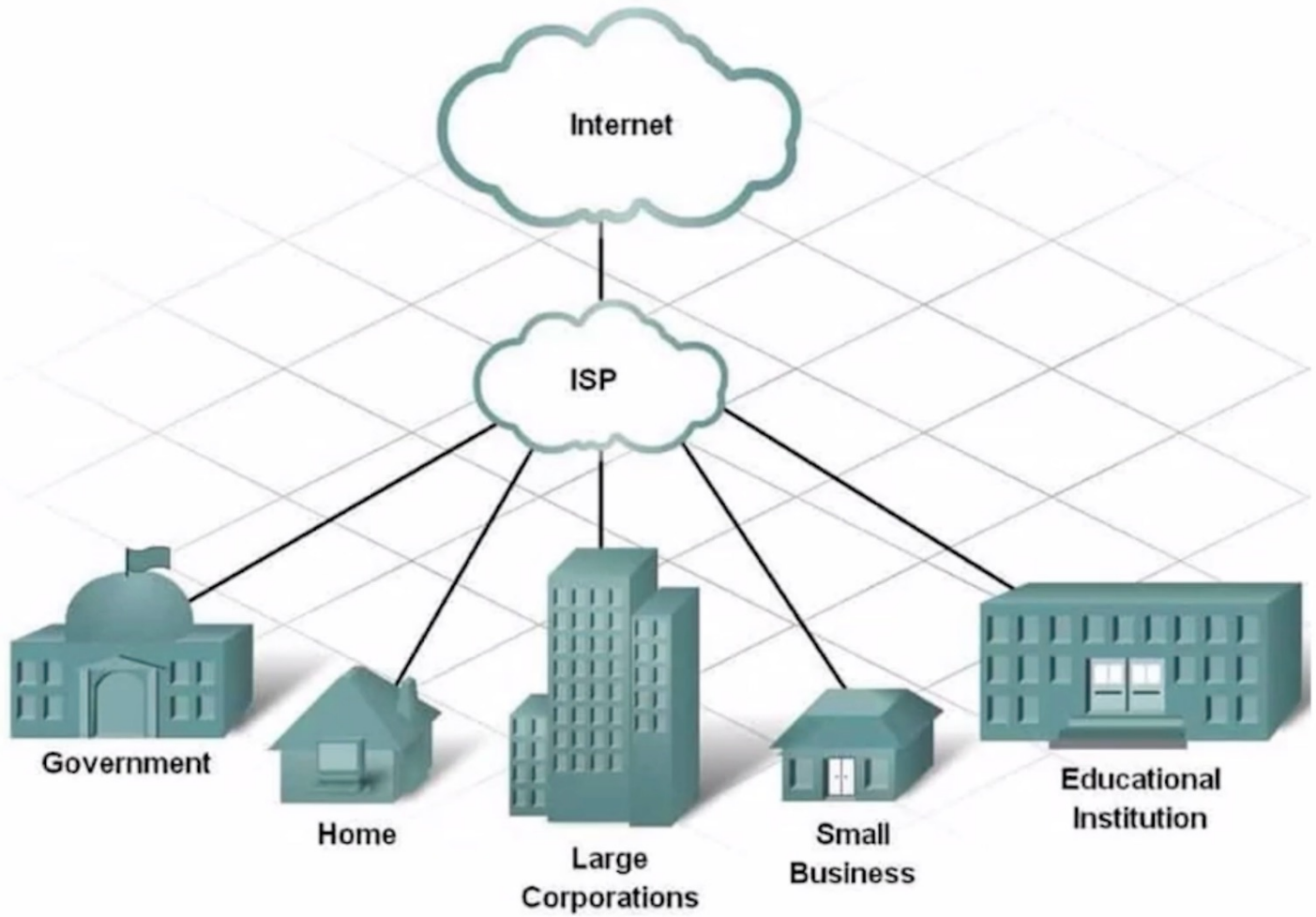


ISP

Por sus siglas en inglés: Intrnet Service Provider. Se refiere a los proveedores de internet para los usuarios comunes como nosotros. Proveen de la infraestructura y conexión necesaria para poder acceder a interner libremente.



ISP (Internet Service Provider)



DNS (Domain Name System)

172.217.7.23

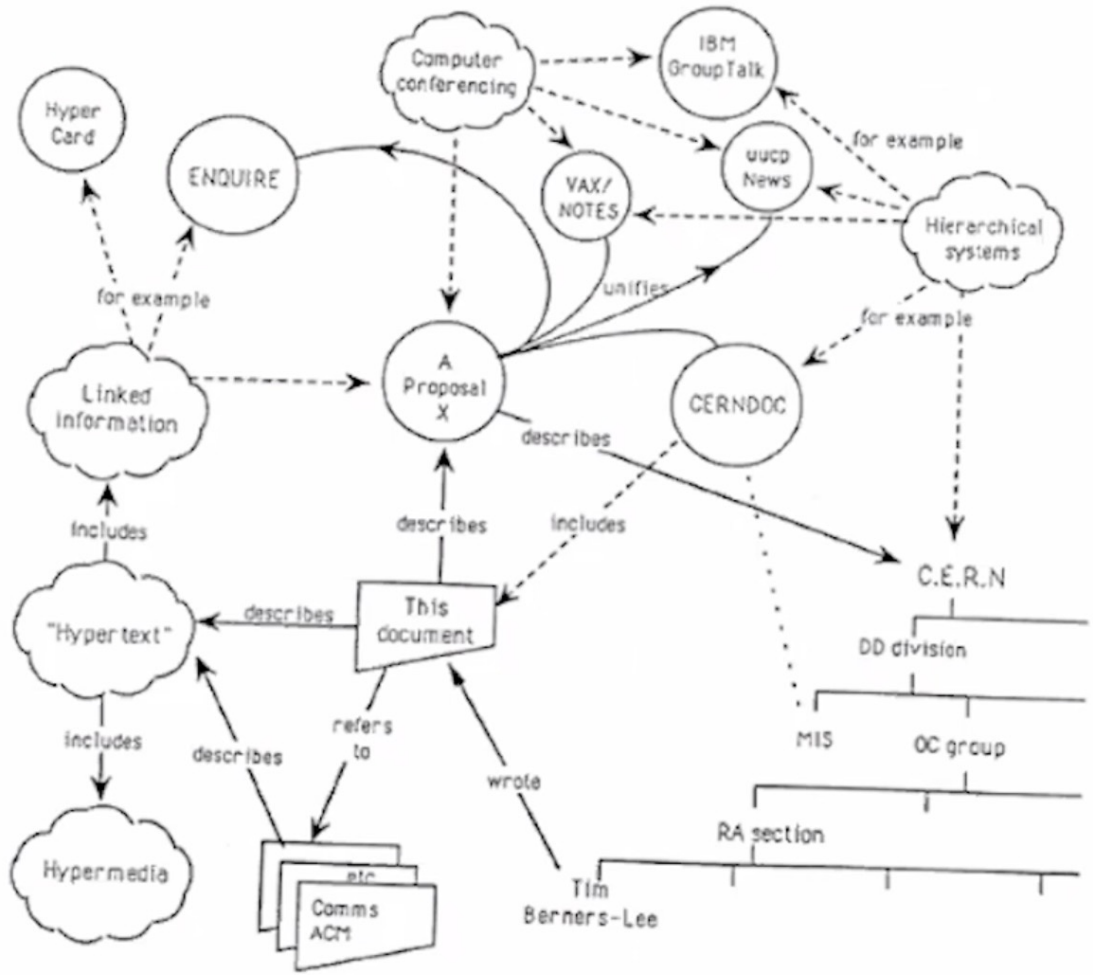
Tim Berners-Lee

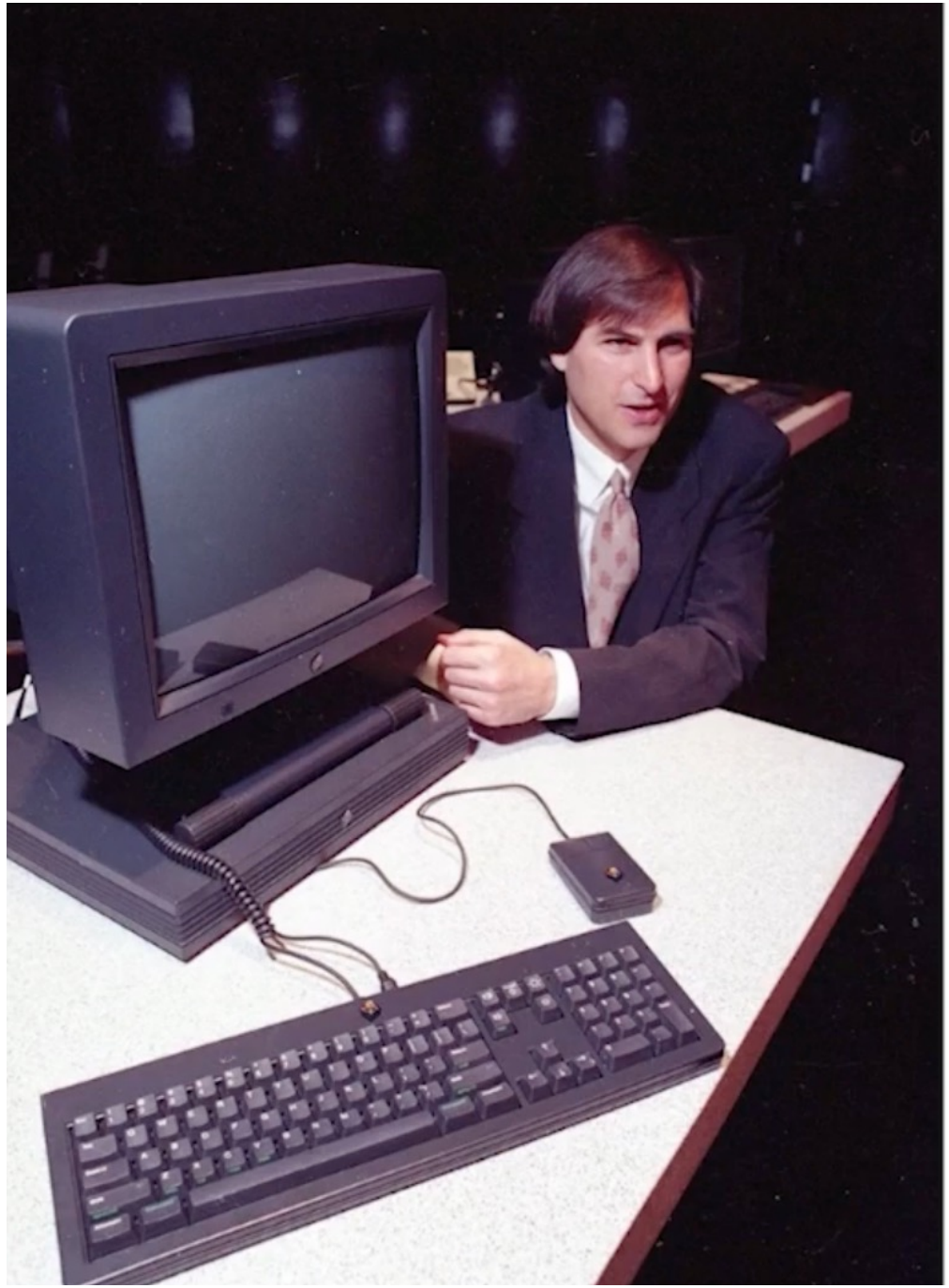
Information Management: A Proposal

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 sytstem.

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






NeXT

Tim había escrito las tres tecnologías fundamentales que siguen siendo la base de la web actual.

- **HTML:** HyperText Markup Language.
  El lenguaje de marcado (formato) para la web.
- **URL:** Uniform Resource Locator. Un tipo de "dirección" que es única y que se utiliza para identificar cada recurso en la web.
- **HTTP:** Hypertext Transfer Protocol.
  Permite la recuperación de recursos vinculados de toda la web.

La primer página web

World Wide Web

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.

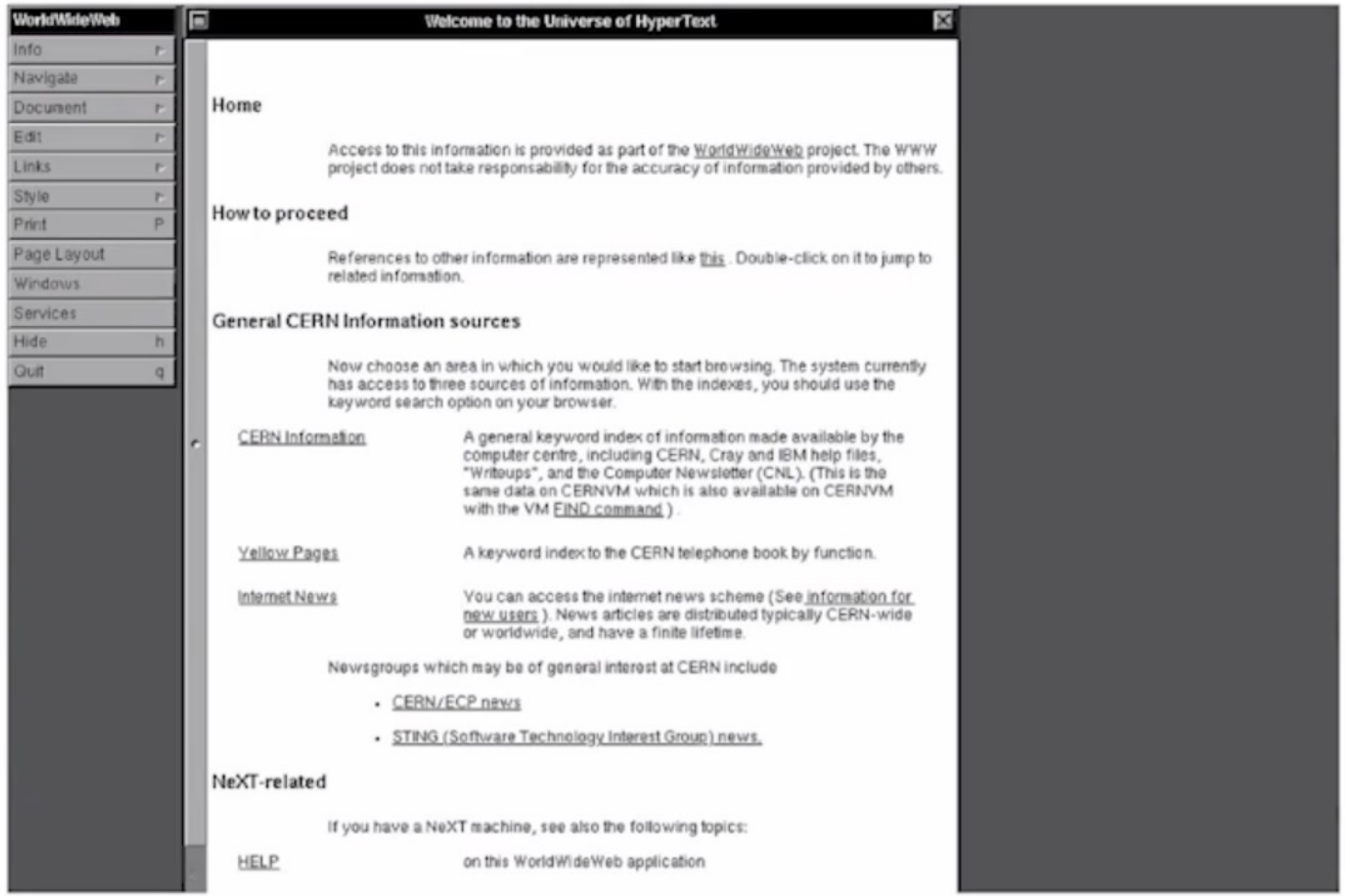
People
: A list of some people involved in the project.

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.

World Wide Web browser

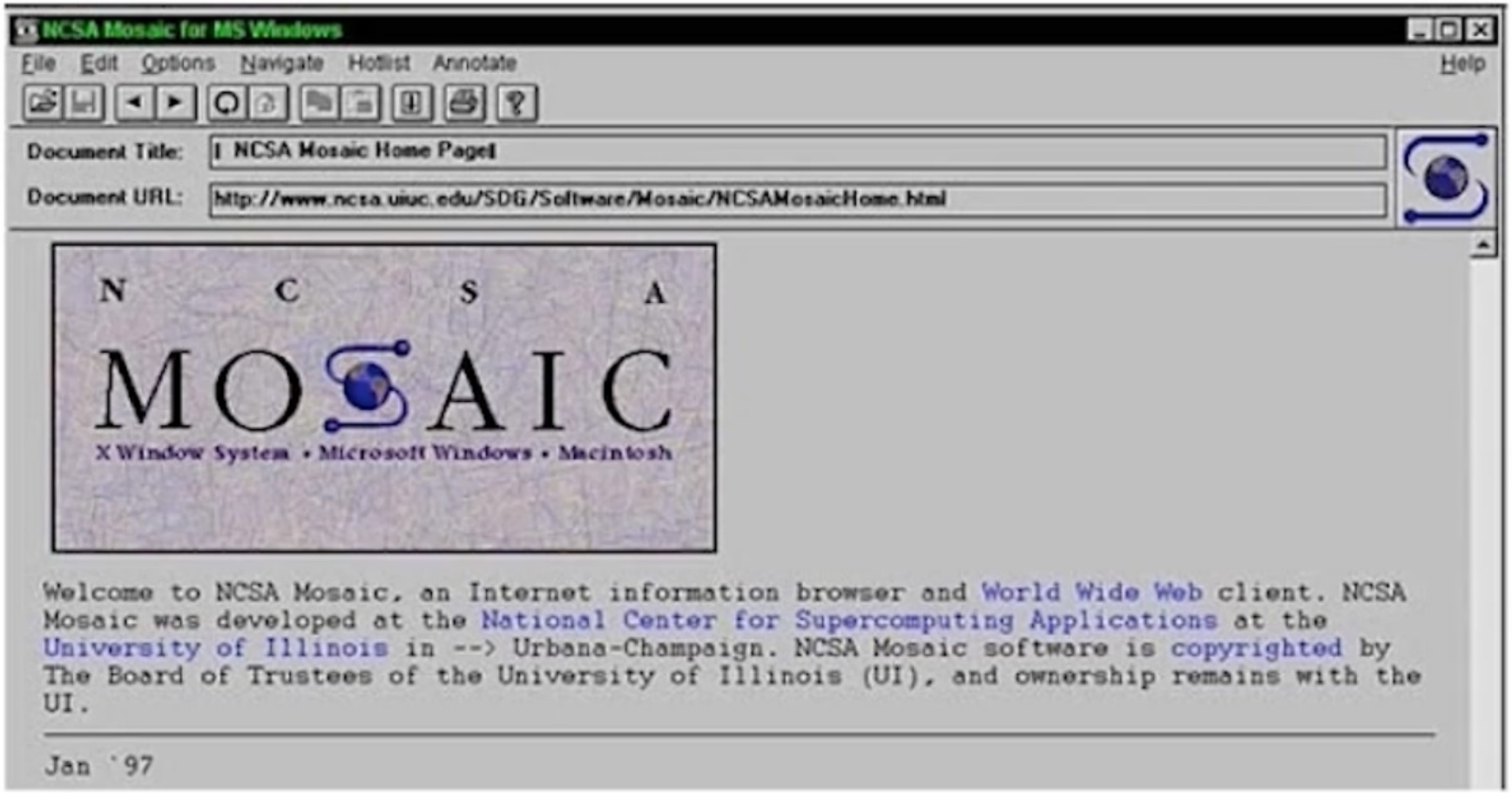


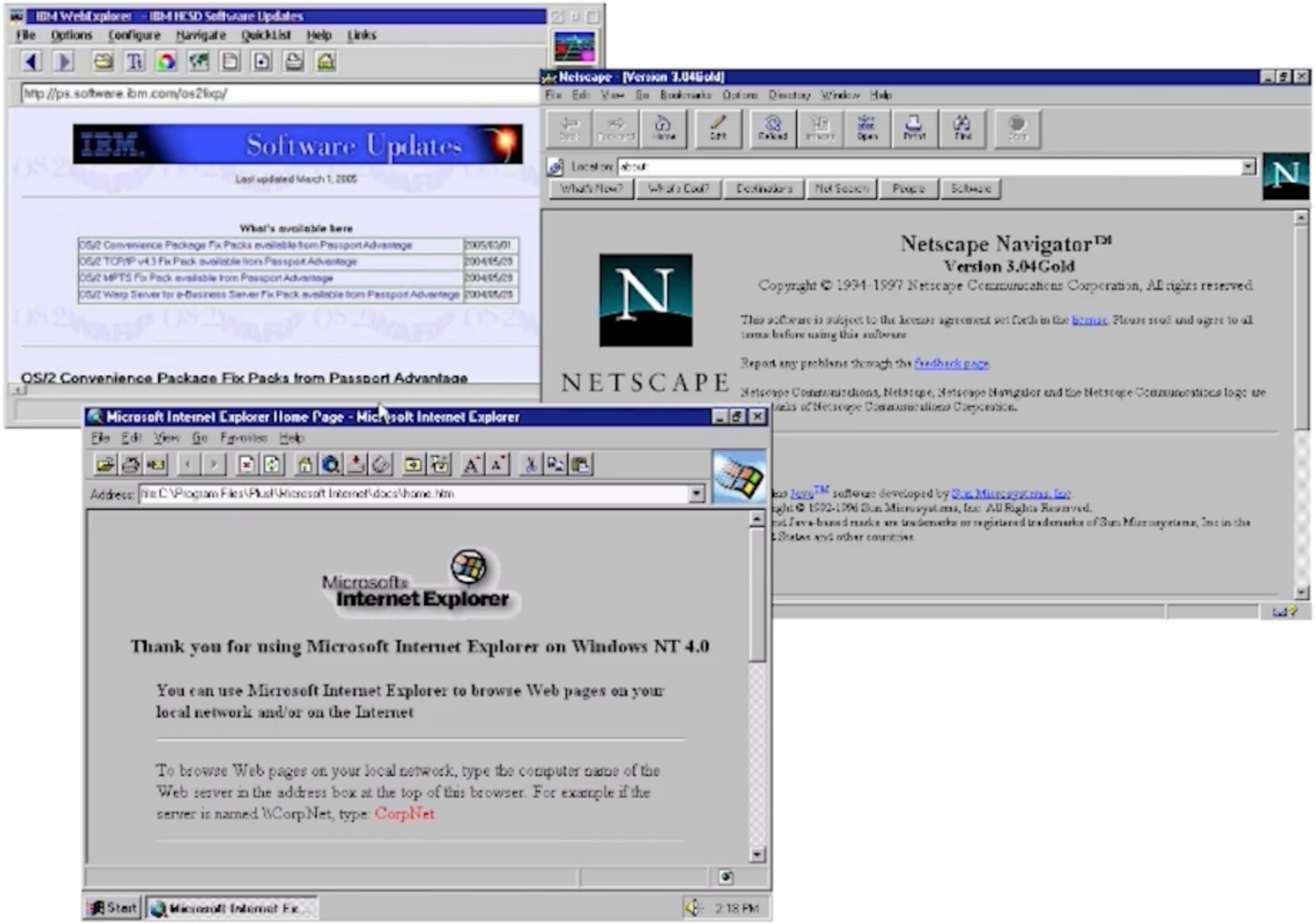
World Wide Web consortium

W3C cuenta con 462 miembros, entre ellos se encuentran:

Airbnb Inc.
Facebook
Alibaba Group
Amazon
Apple, Inc.
BBVA
Cisco
Indeed

Mosaic


NCSA Mosaic for MS Windows
File Edit Options Navigate Hotlist Annotate Help
Document Title: NCSA Mosaic Home Page!
Document URL: http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/NCSAMosaicHome.html
N C S A
MOSAIC
X Window System • Microsoft Windows • Macintosh
Welcome to NCSA Mosaic, an Internet information browser and World Wide Web client. NCSA Mosaic was developed at the National Center for Supercomputing Applications at the University of Illinois in --> Urbana-Champaign. NCSA Mosaic software is copyrighted by The Board of Trustees of the University of Illinois (UI), and ownership remains with the UI.
Jan '97


IBM WebExplorer - IBM HESD Software Updates
File Options Configure Navigate QuickList Help Links
http://ps.software.ibm.com/os2fixp/
Software Updates
Last updated March 1, 2005
What's available here
OS/2 Convenience Package Fix Packs available from Passport Advantage
OS/2 TCP/IP v4.3 Fix Pack available from Passport Advantage
OS/2 MPTS Fix Pack available from Passport Advantage
OS/2 Warp Server for e-Business Server Fix Pack available from Passport Advantage
OS/2 Convenience Package Fix Packs from Passport Advantage
Netscape - [Version 3.04Gold]
File Edit View Go Bookmarks Options Directory Window Help
Location: about
What's New? What's Cool? Destinations Net Search People Software
Netscape Navigator™
Version 3.04Gold
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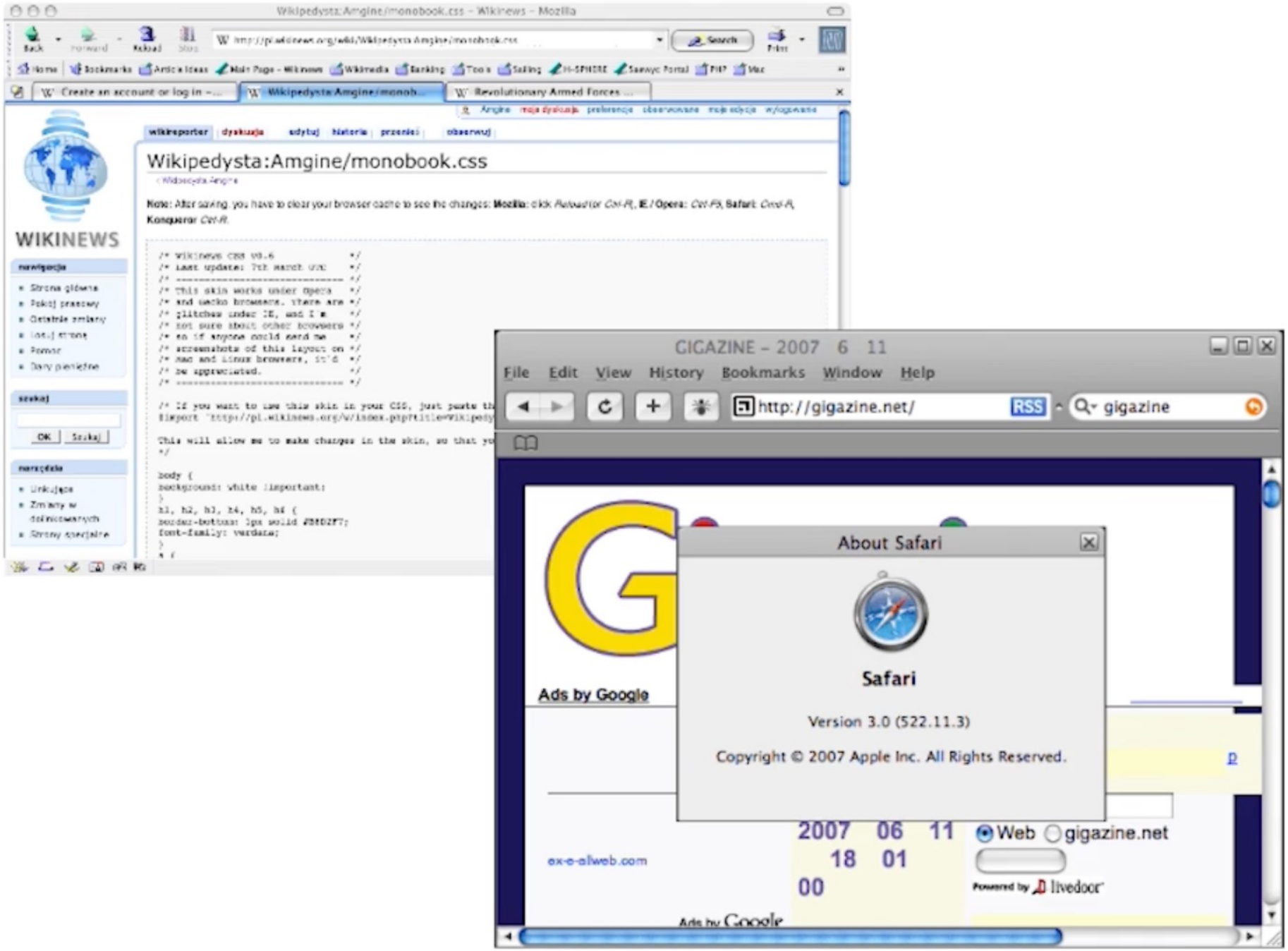
Report any problems through the feedback page.
NETSCAPE
Microsoft Internet Explorer Home Page - Microsoft Internet Explorer
File Edit View Go Favorites Help
Address: file:C:\Program Files\Plus!\Microsoft Internet\docs\home.htm
Microsoft Internet Explorer
Thank you for using Microsoft Internet Explorer on Windows NT 4.0
You can use Microsoft Internet Explorer to browse Web pages on your local network and/or on the Internet
To browse Web pages on your local network, type the computer name of the Web server in the address box at the top of this browser. For example if the server is named \\CorpNet, type: CorpNet
Start
2:18 PM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File Edit View History Bookmarks Window Help
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About Safari
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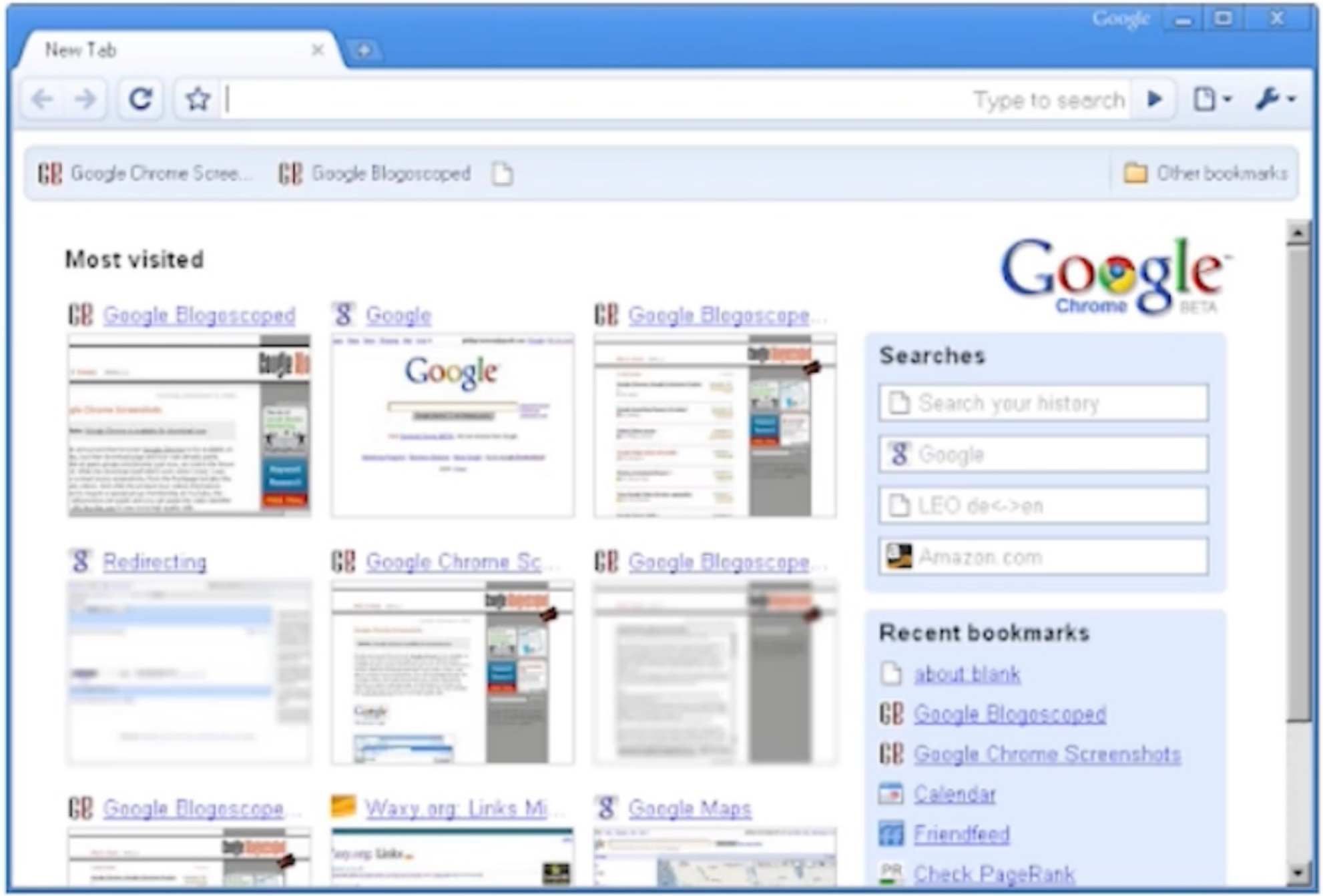
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Google Blogoscoped
Other bookmarks
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Redirecting
Google Chrome Sc...
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Google Blogoscope...
Waxy.org: Links Mi...
Google Maps
Google
Chrome BETA
Searches
Search your history
Google
LEO de<->en
Amazon.com
Recent bookmarks
about:blank
Google Blogoscoped
Google Chrome Screenshots
Calendar
Friendfeed
Check PageRank

HTTP

Hypertext Transfer Protocol

HTTP

HTTP Methods

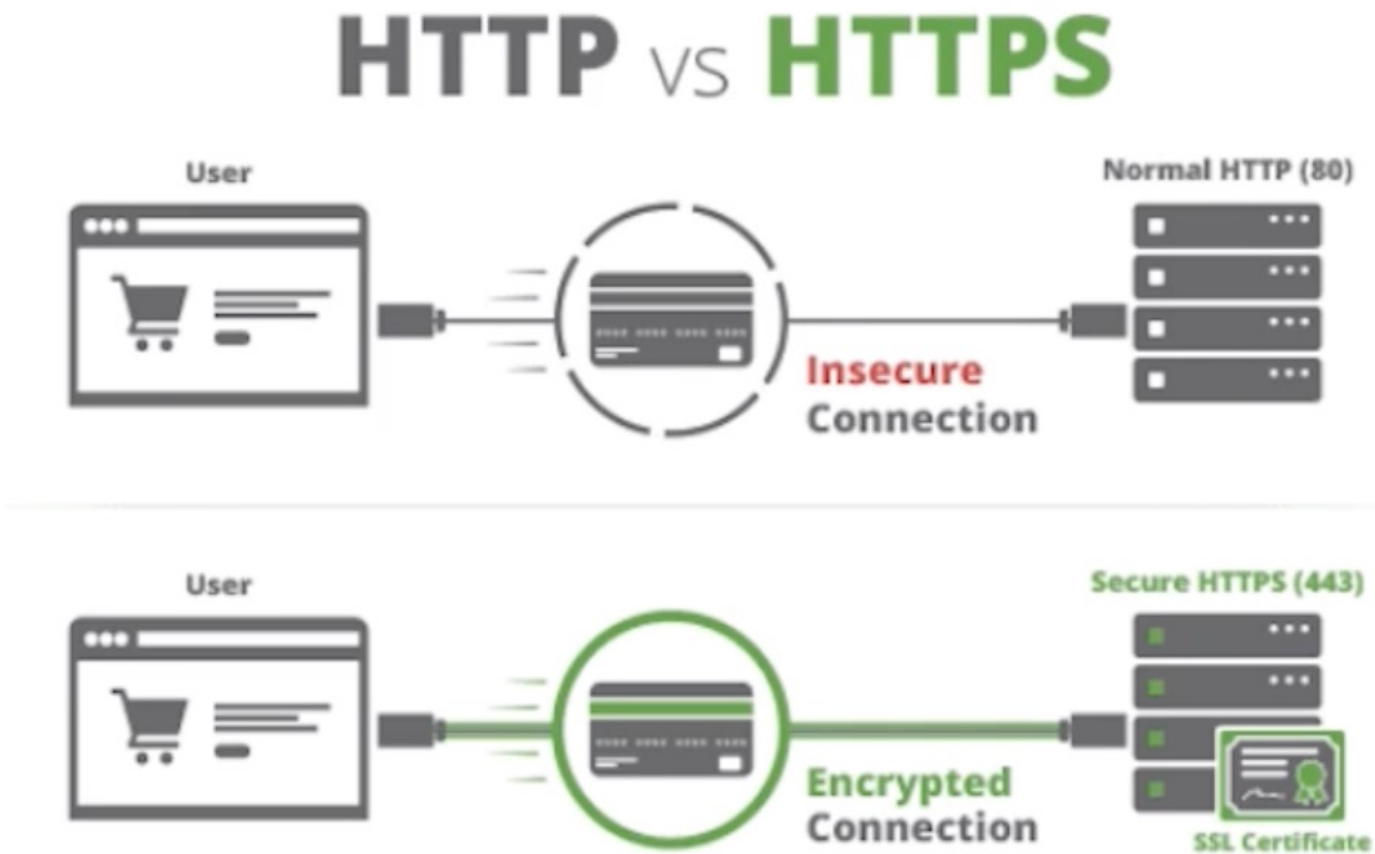
Method	Descripción
GET	Solicita datos
POST	Envía datos
PUT	Crea o reemplaza datos
DELETE	Borra datos especificos

HTTPS

Hypertext Transfer Protocol Secure

HTTPS

Hypertext Transfer Protocol Secure



La guerra de los navegadores

HTML

CSS

JavaScript

HTML

CSS

JAVASCRIPT

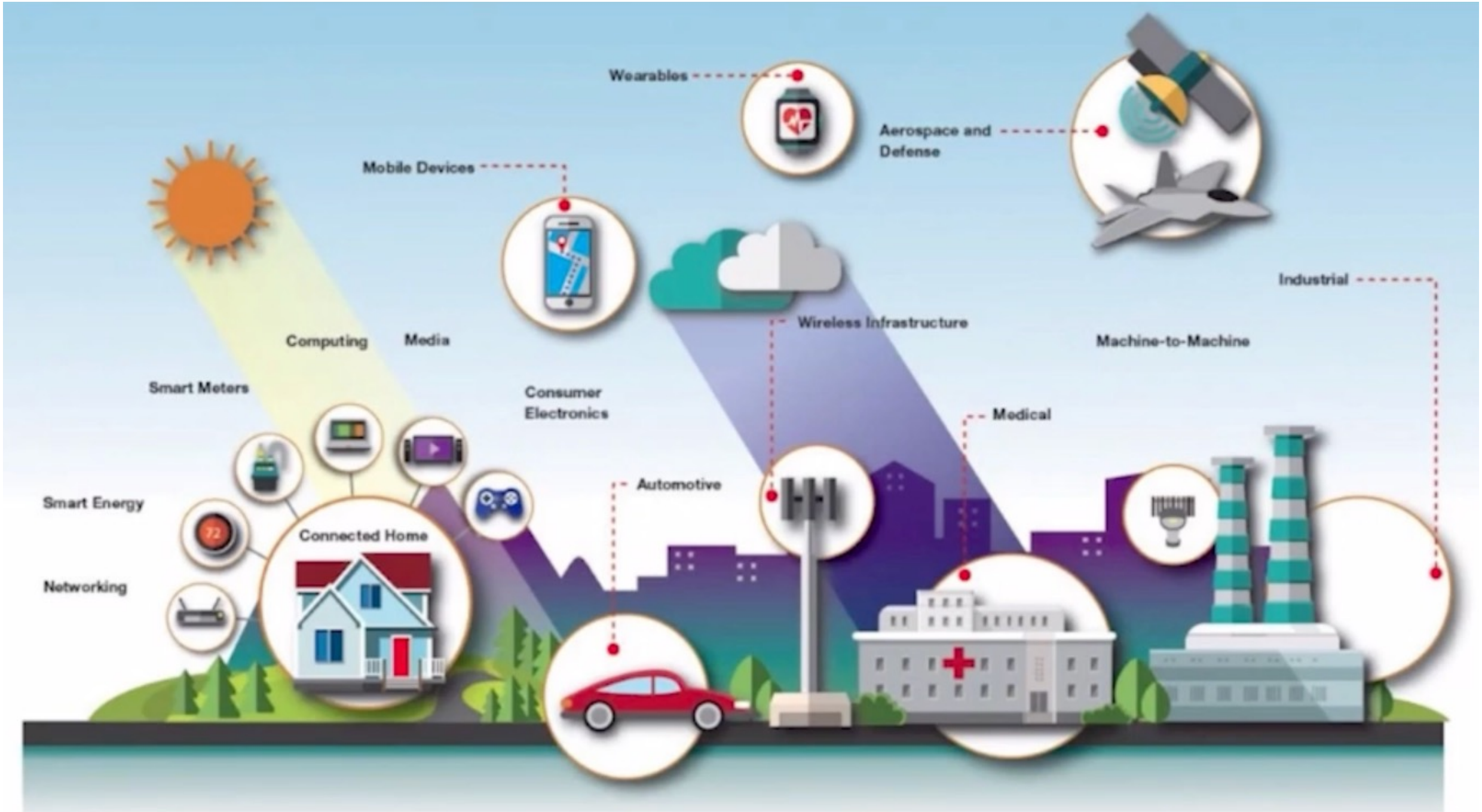
WebAssembly

Estado actual

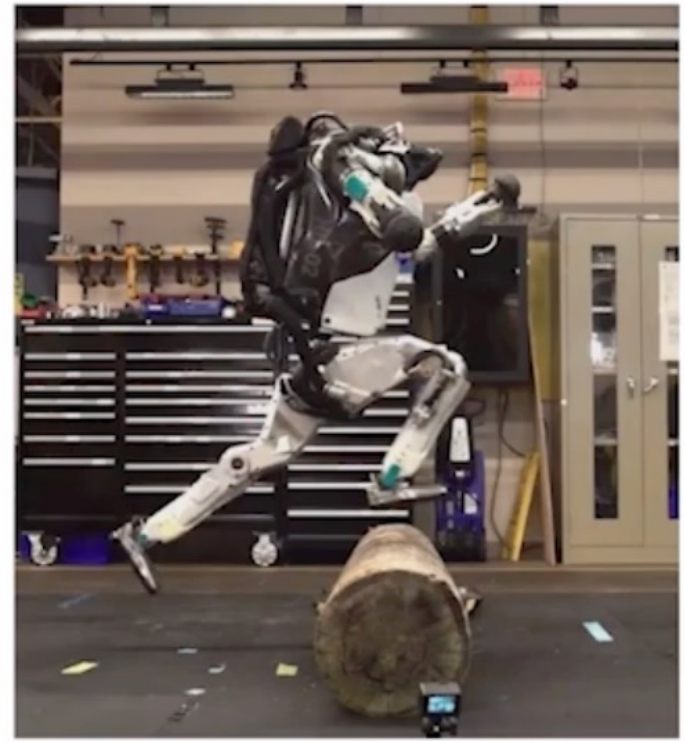
+ 4,000 millones de dispositivos móviles conectados a Internet = más de la mitad de la humanidad.


VAIO
VAIO
SONY
VAIO


NEWS
NEWS
NEWS
11:45
11:45


Wearables
Aerospace and Defense
Mobile Devices
Industrial
Wireless Infrastructure
Computing
Media
Machine-to-Machine
Smart Meters
Consumer Electronics
Medical
Automotive
Smart Energy
Connected Home
Networking

Machine learning & artificial intelligence

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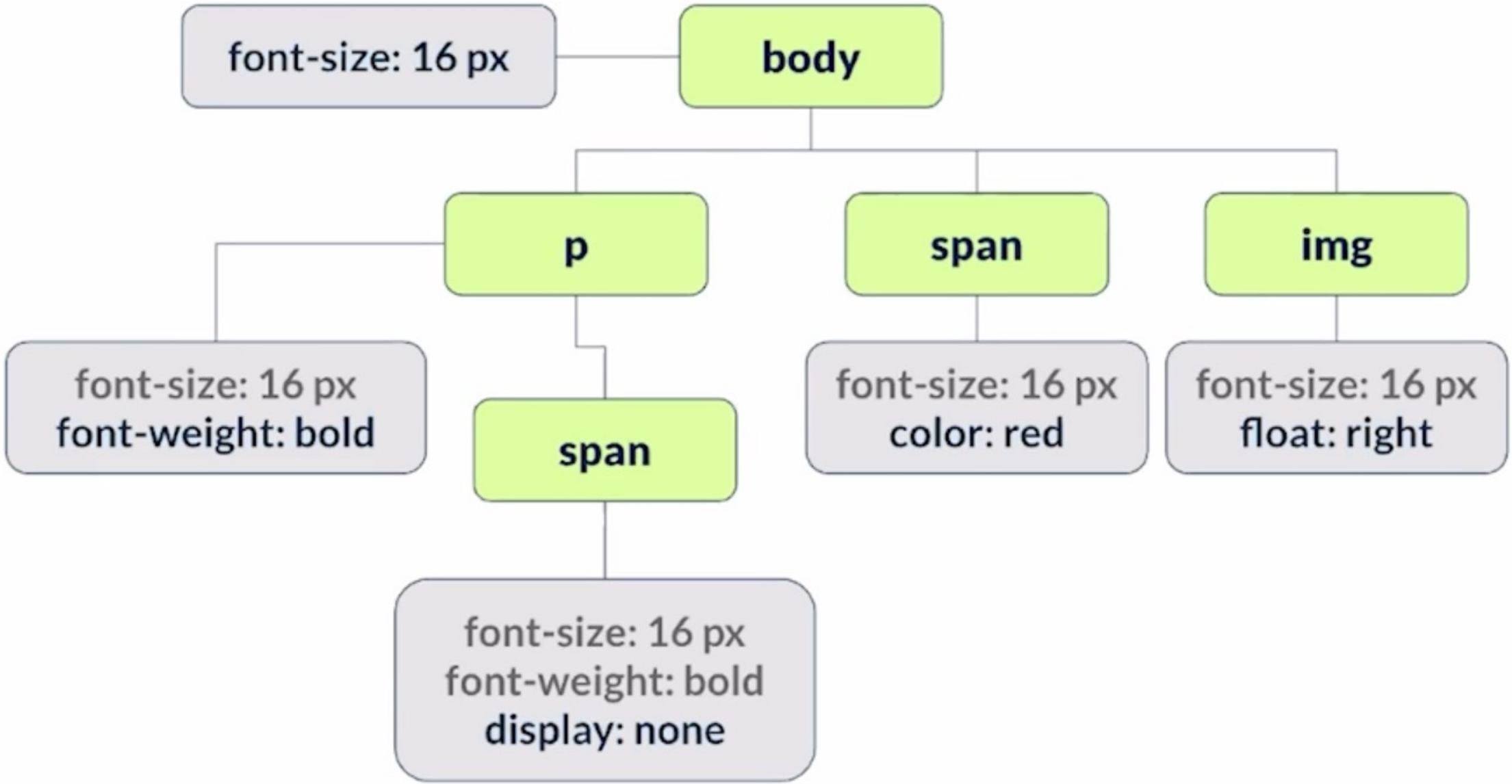
Verizon
Windsor, CT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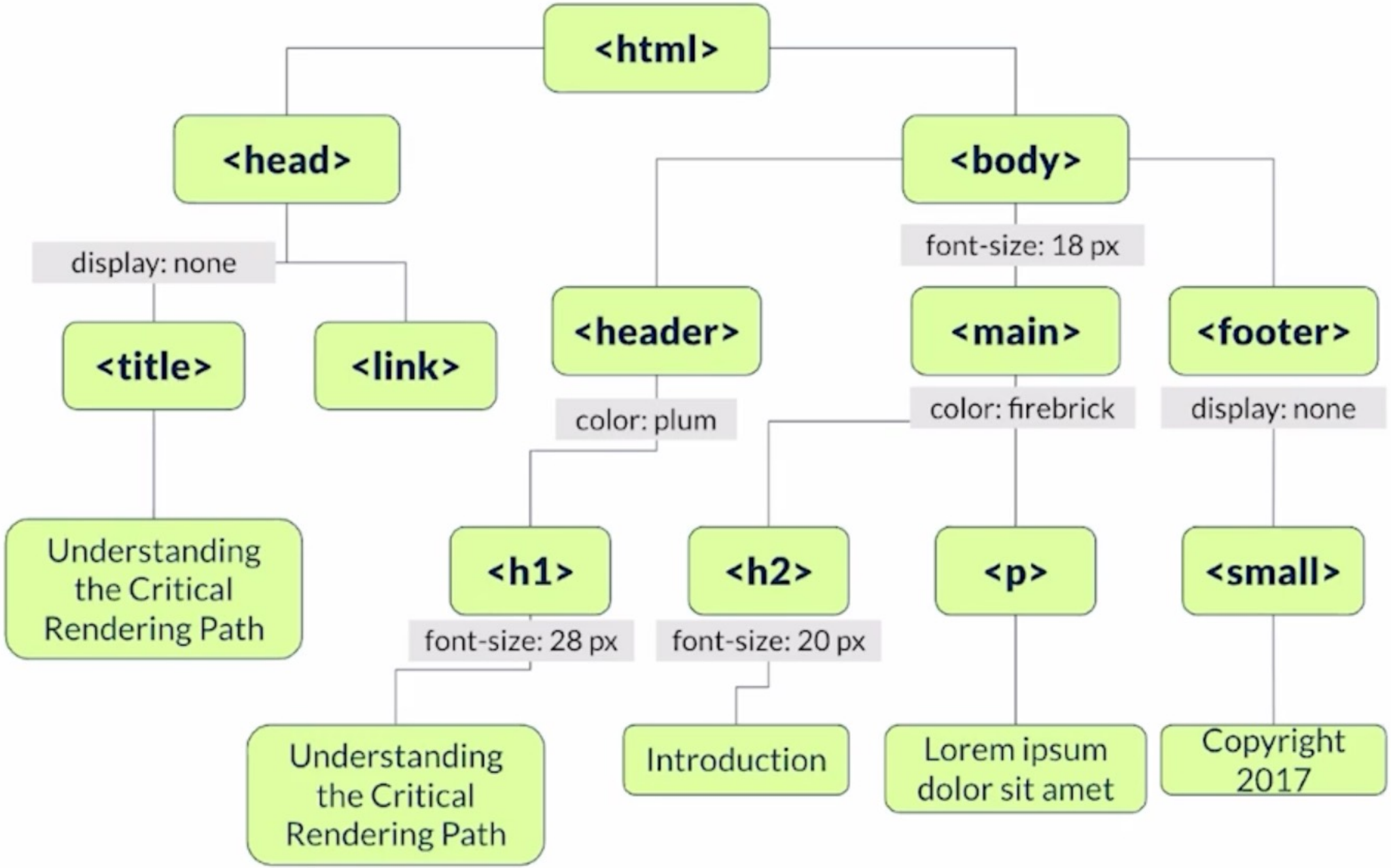
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Understanding the Critical Rendering Path
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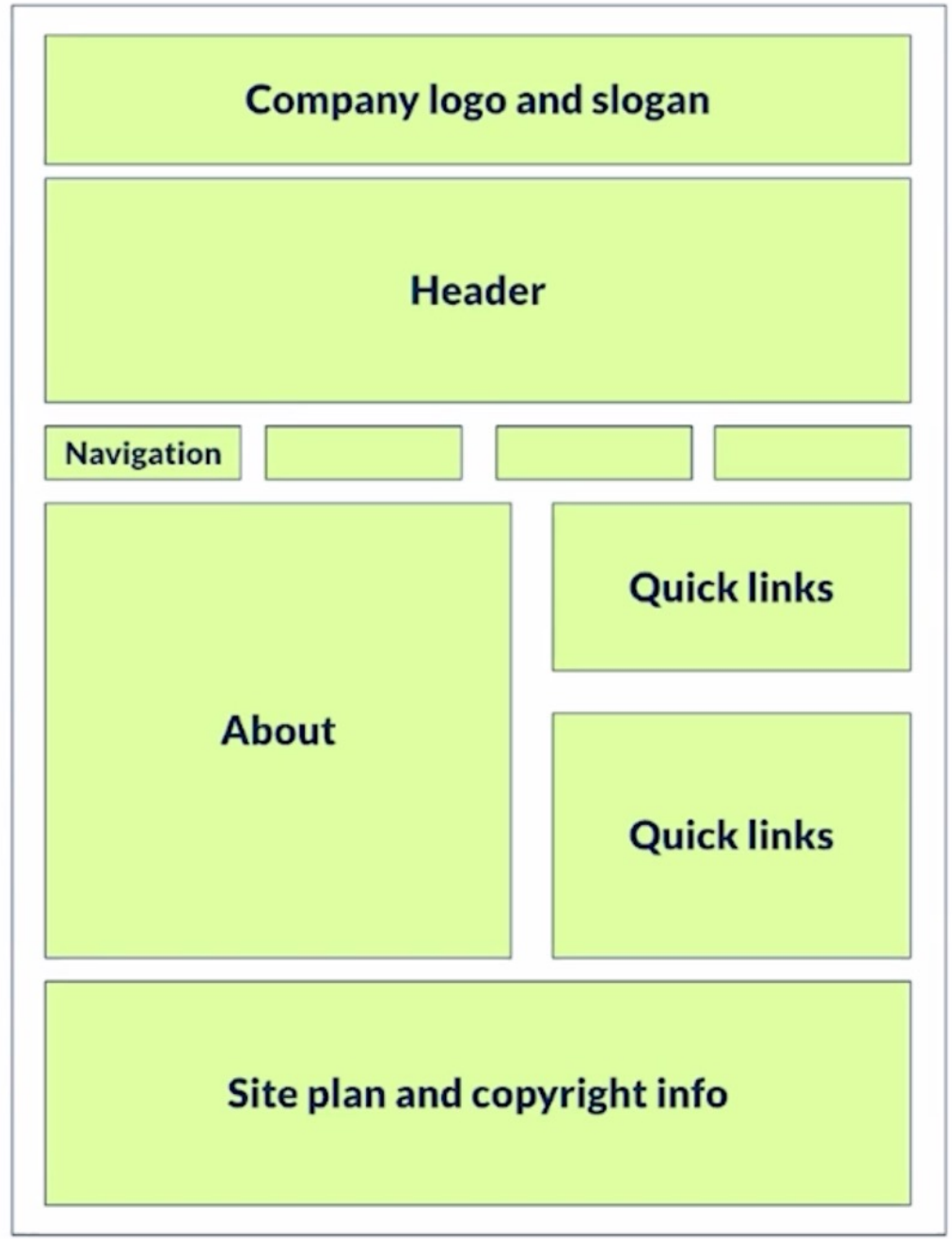
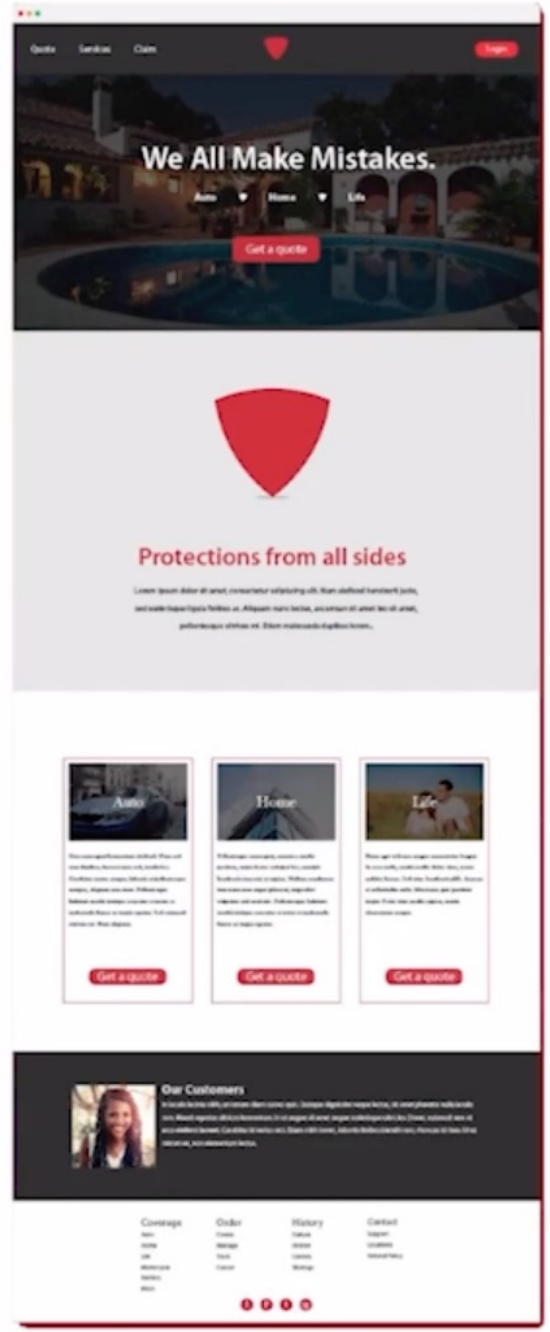
Understanding the Critical Rendering Path
Introduction
Lorem ipsum dolor sit amet
Copyright 2017

Layout


Company logo and slogan
Header
Navigation
About
Quick links
Quick links
Site plan and copyright info

Paint


We All Make Mistakes.
Get a quote
Protections from all sides
Auto
Home
Life
Get a quote
Get a quote
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