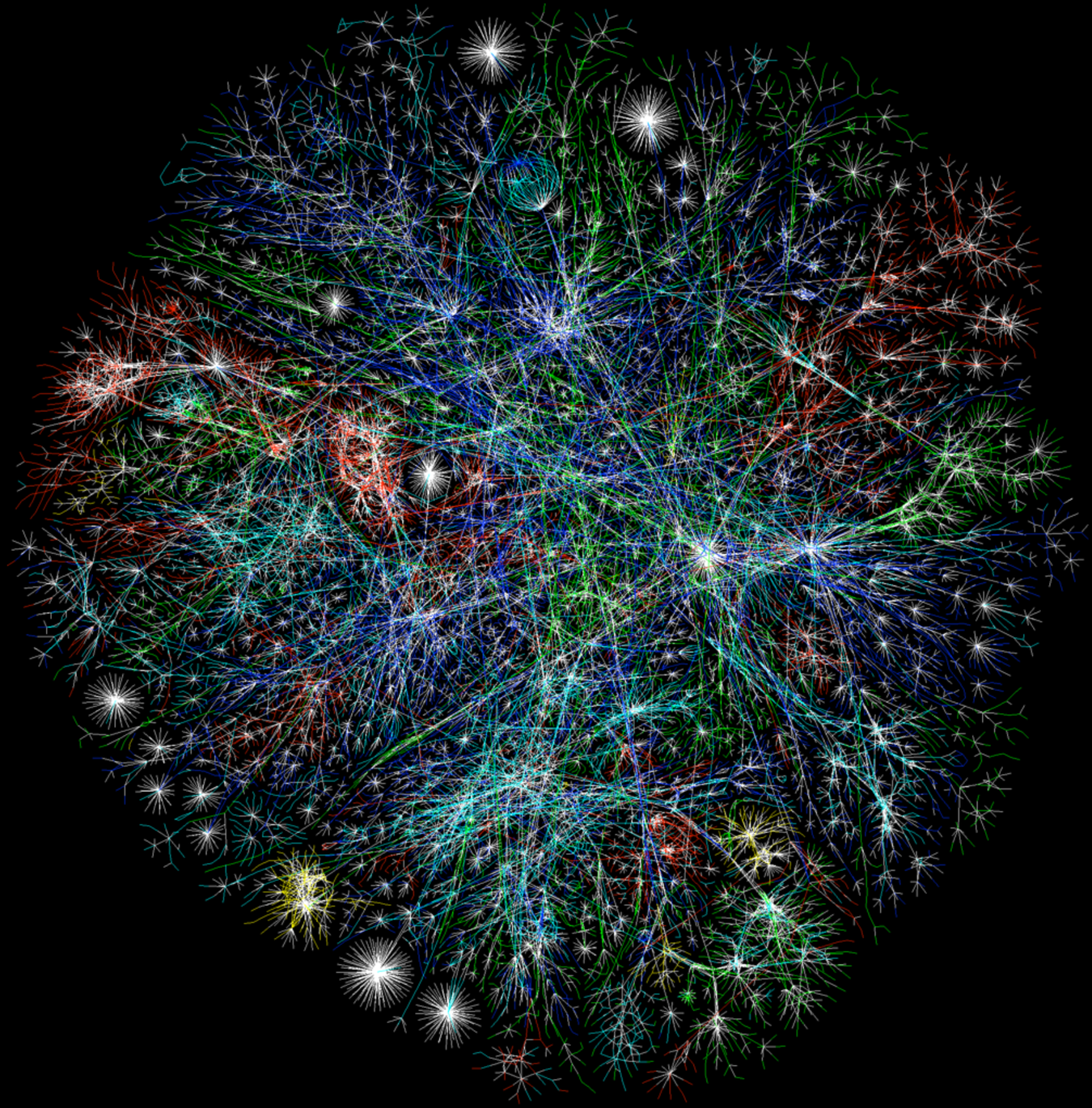
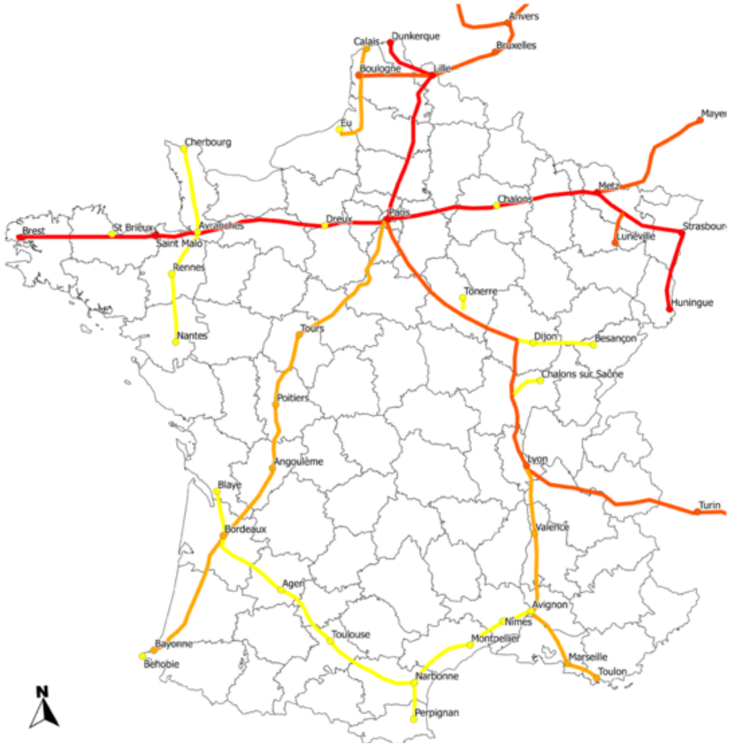
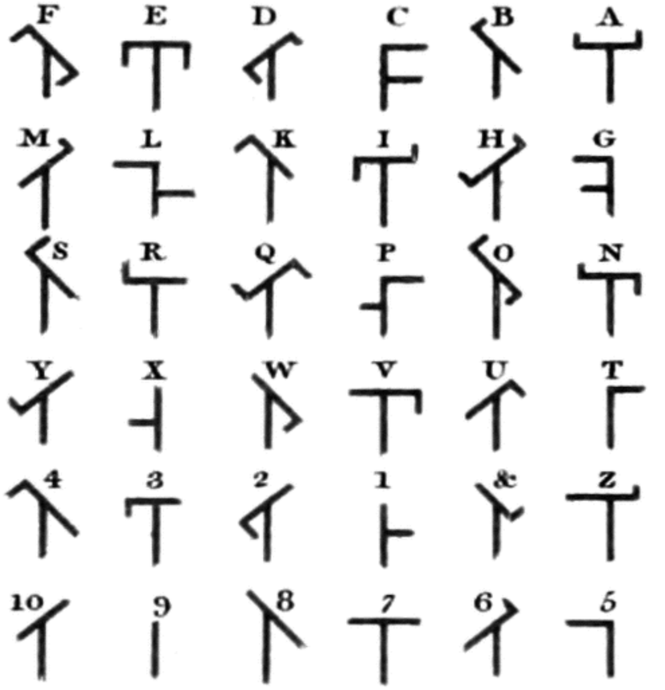
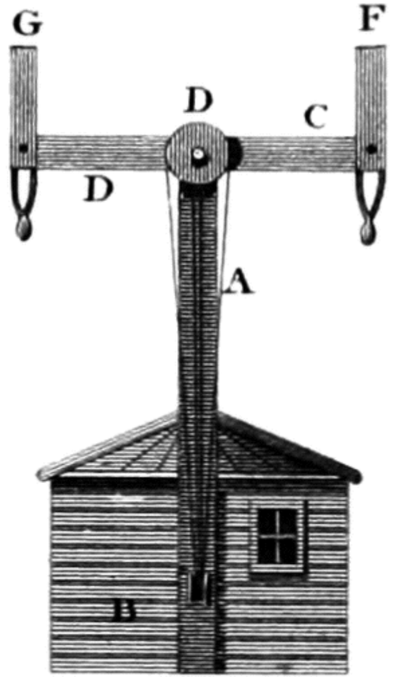
RESILIENCE

SHARD

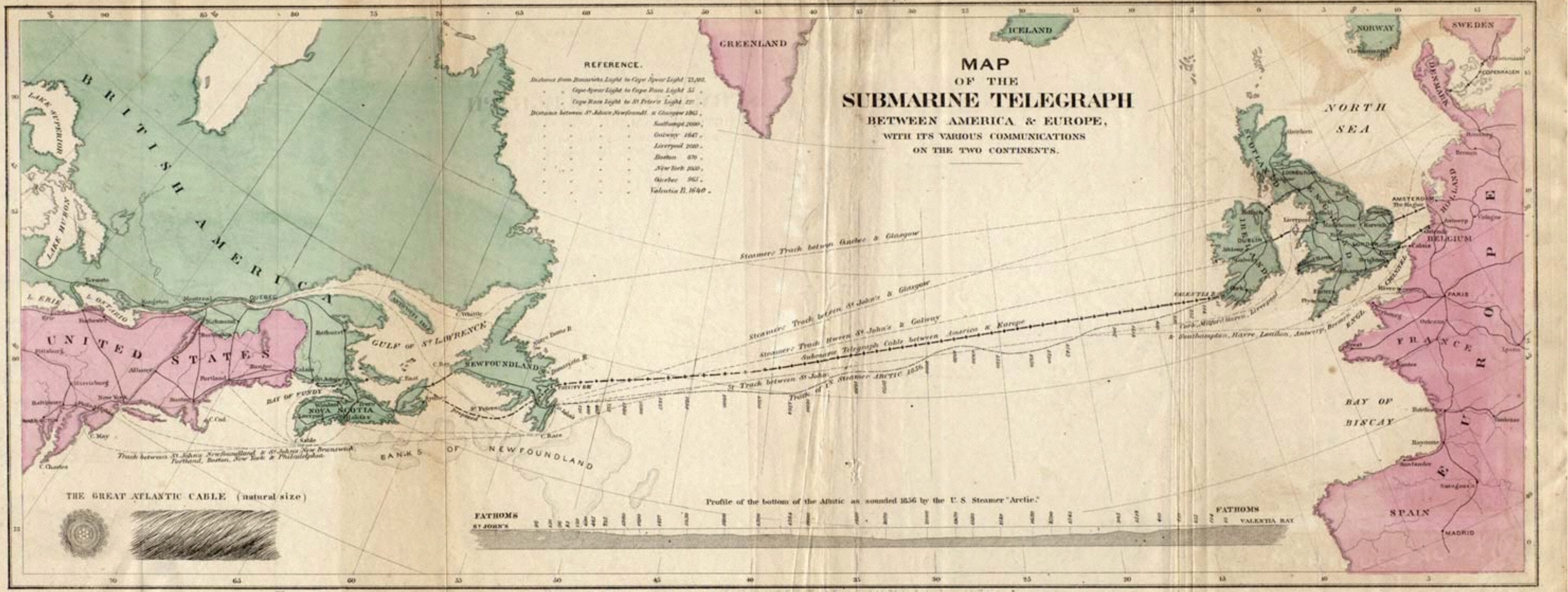



Anvers
Calais
Dunkerque
Bruxelles
Boulogne
Lille
Eu
Mayen
Cherbourg
Metz
Chalons
Paris
Dreux
Strasbour
Brest
St Brieux
Avranches
Lunéville
Saint Malo
Rennes
Tonerre
Huningue
Nantes
Tours
Dijon
Besançon
Chalons sur Saône
Poitiers
Angoulême
Lyon
Blaye
Turin
Bordeaux
Valence
Agen
Avignon
Nimes
Toulouse
Montpellier
Bayonne
Behobie
Marseille
Toulon
Narbonne
Perpignan
N

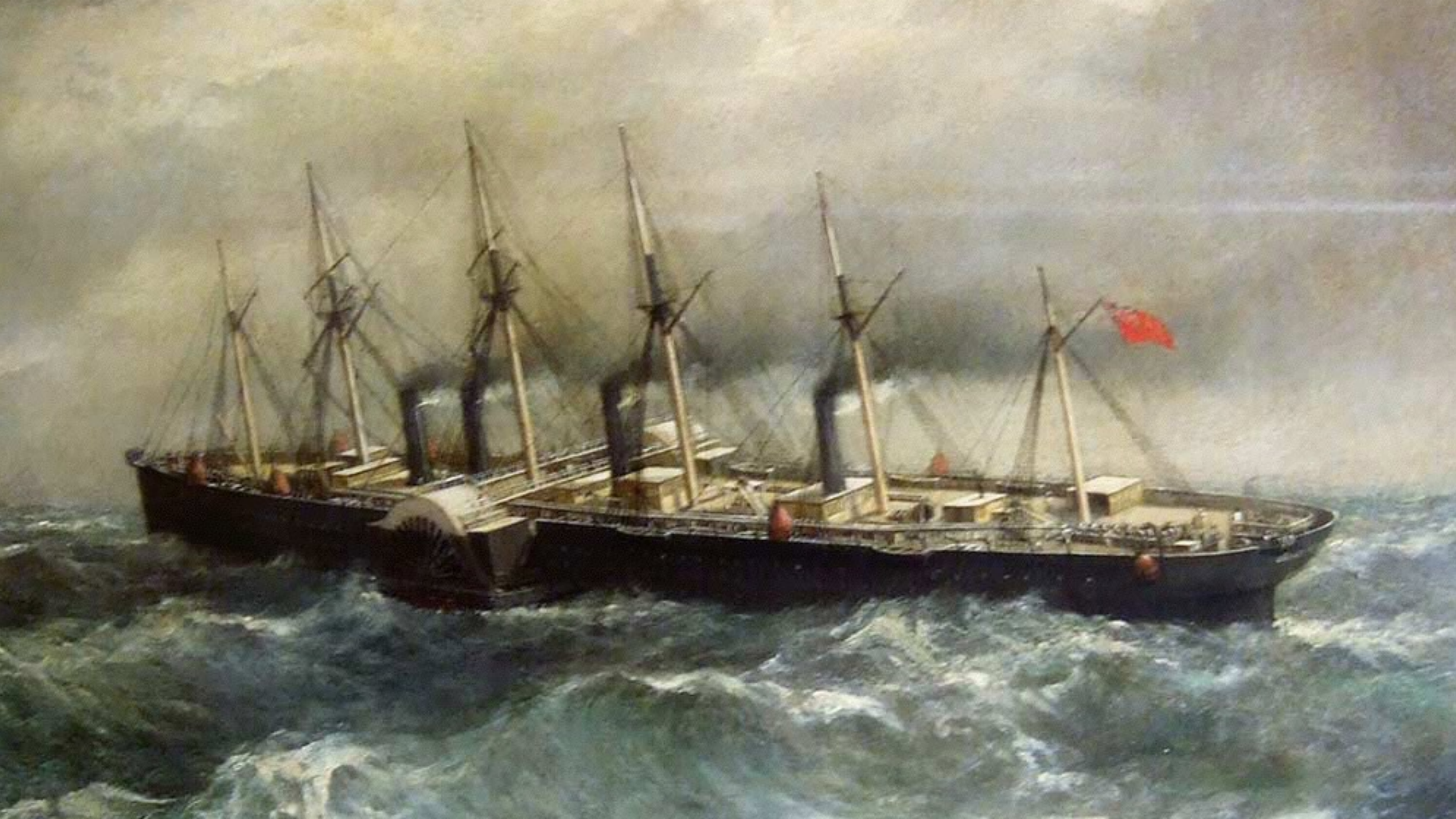

F E D C B A
M L K I H G
S R Q P O N
Y X W V U T
4 3 2 1 & Z
10 9 8 7 6 5


G
F
D
C
D
A
B

MAP
OF THE
SUBMARINE TELEGRAPH
BETWEEN AMERICA & EUROPE,
WITH ITS VARIOUS COMMUNICATIONS ON THE TWO CONTINENTS.



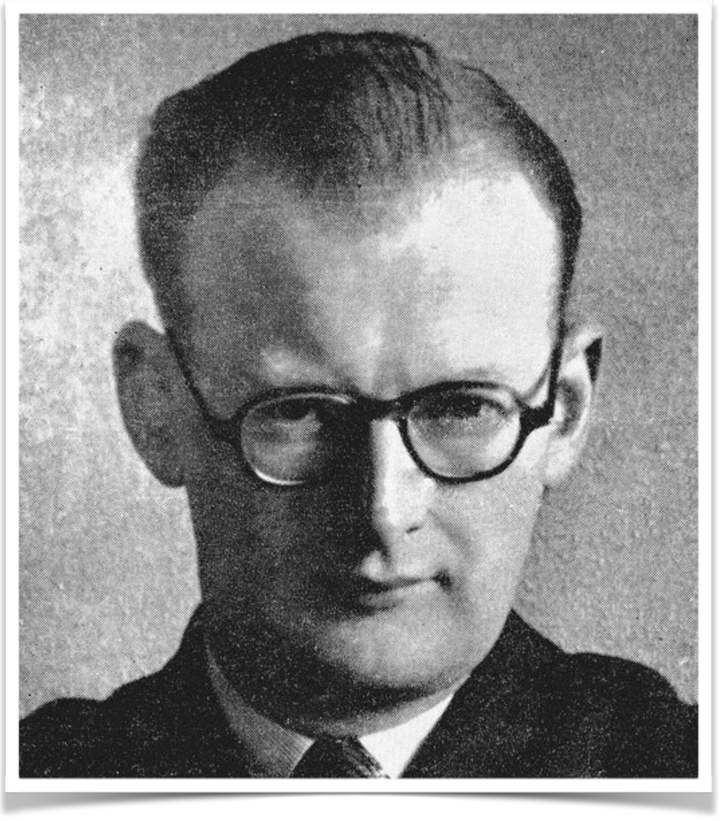
Printed for HOWE'S ADVENTURES & ACHIEVEMENTS OF AMERICANS.

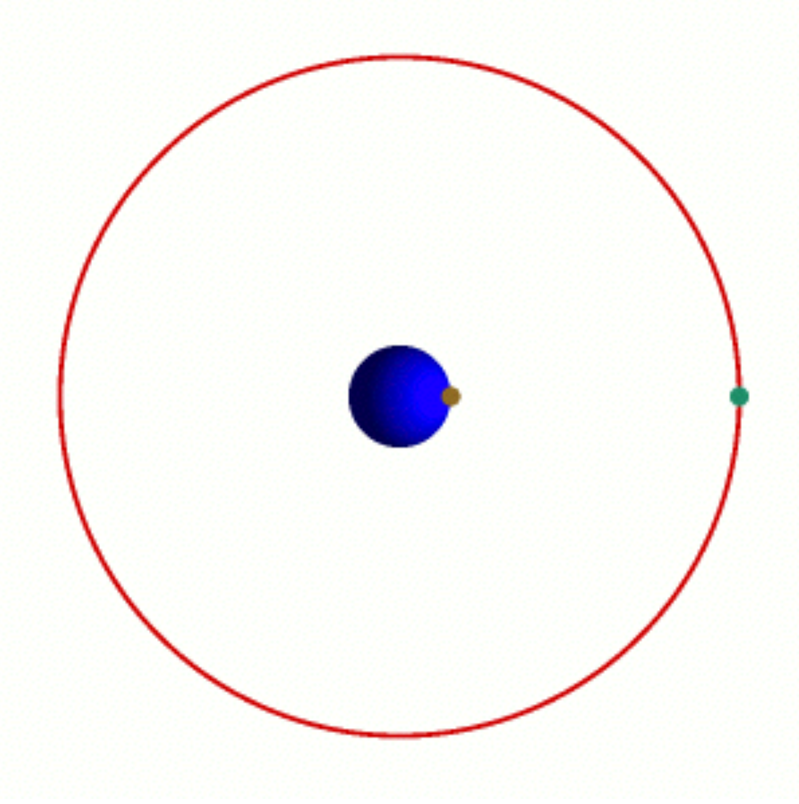


"It is a triumph more glorious,
because far more useful to mankind,
than was ever won by conqueror
on the field of battle."

—President James Buchanan
to Queen Victoria

231



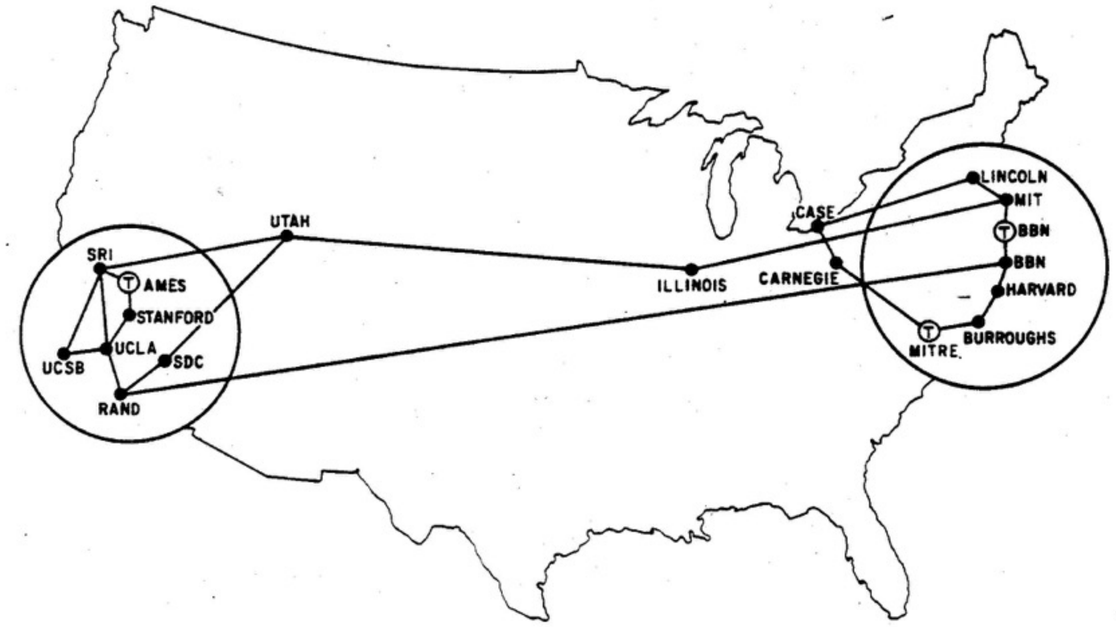


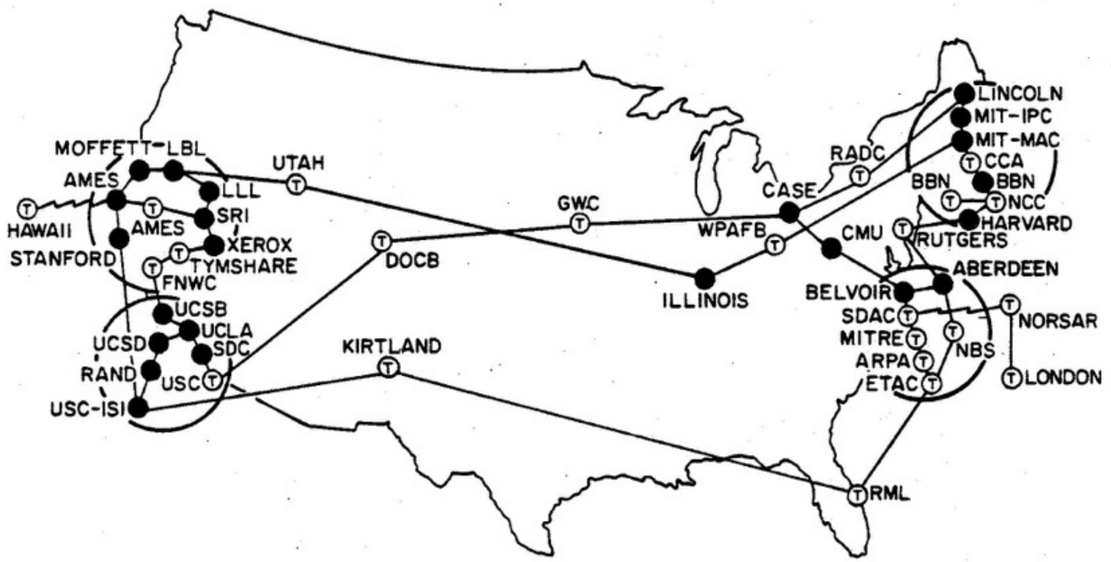
A NEW MAP of the SUBMARINE CABLES connecting the World,

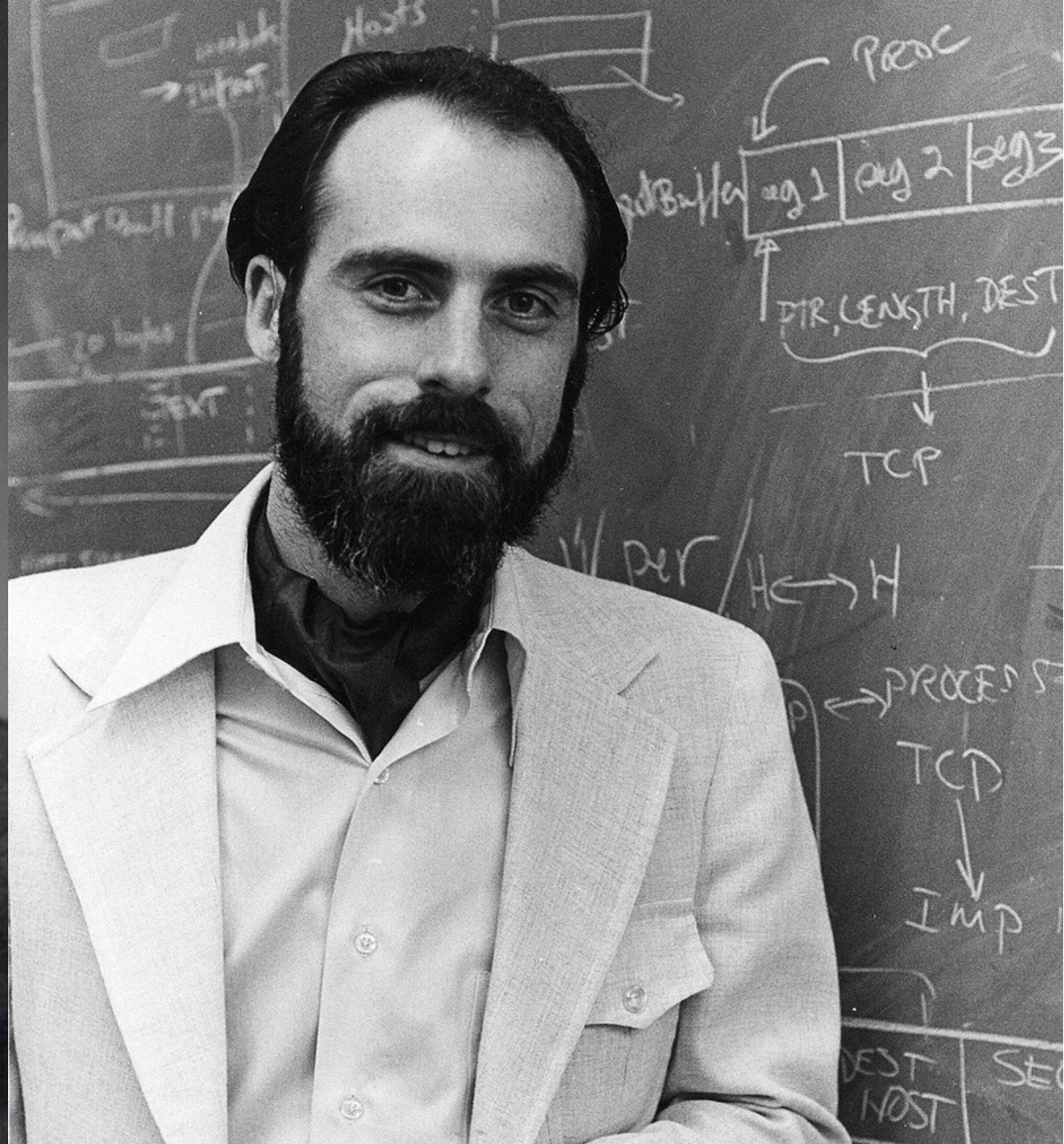
according to the best Authorities with all the latest Discoveries to the PRESENT PERIOD, 2015.

The ARPANET in December 1969

lo


SRI
AMES
STANFORD
UCLA
SDC
UCSB
RAND
UTAH
ILLINOIS
CASE
CARNEGIE
LINCOLN
MIT
BBN
BBN
HARVARD
BURROUGHS
MITRE


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


PROC
arg 1
arg 2
arg3
DIR, LENGTH, DEST
TCP
TCP
IMP
DEST
HOST

“Deliver the bits, stupid.”

—David Isenberg
“Rise of the Stupid Network”

HTTP

email

ftp

telnet

gopher

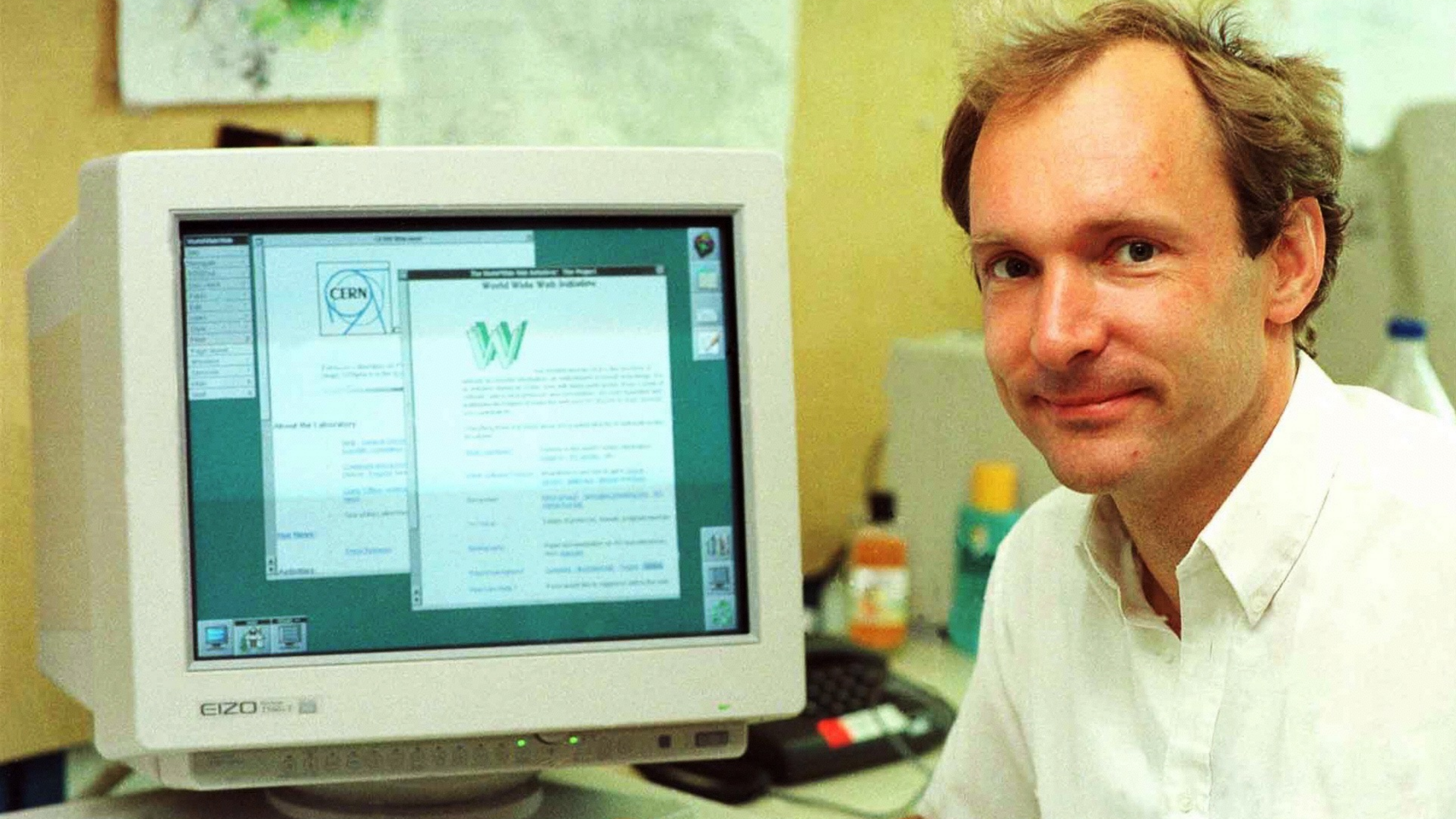
TCP/IP

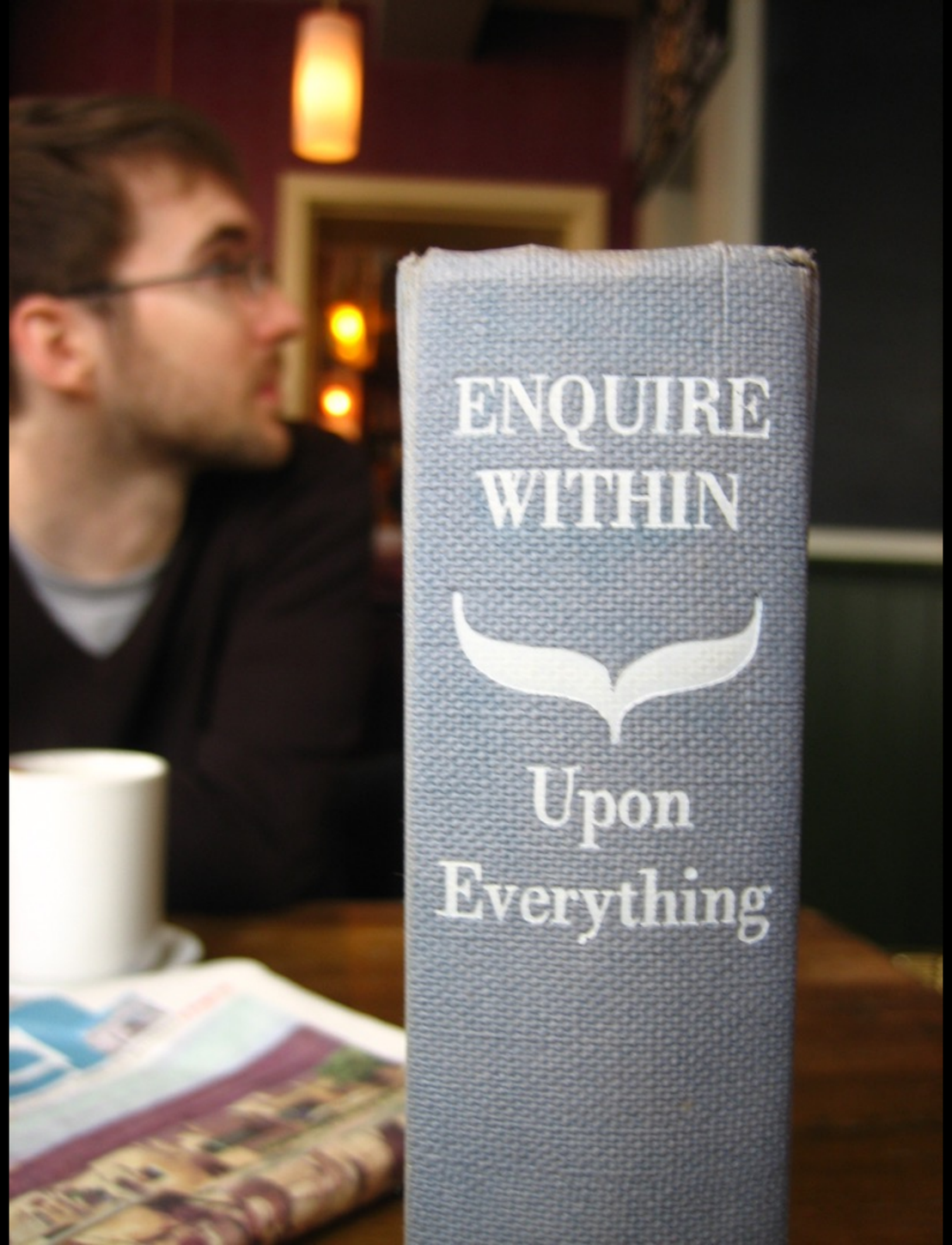
HTTP

URLs

HTML

WWW


CERN
World Wide Web initiative
EIZO


ENQUIRE
WITHIN
Upon
Everything

CERN DD/OC

Tim Berners-Lee, CERN/DD

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

WHERE THE
WEB
WAS BORN
In the offices of this corridor, all the fundamental technologies of the Wor
Wide Web were developed.
Started in 1990 from a proposal made by Tim Berners-Lee in 1989, the effo
was first divided between an office in building 31 of the Computing ar
Networking Division (CN) and one in building 2 of the Electronics ar
Computing for Physics Division (ECP).
In 1991 the team came together in these offices, then belonging to EC
It was composed of two CERN staff members, Tim Berners-Lee (GB) ar
Robert Cailliau (BE), aided by a number of Fellows, Technical Student
a Coopérant and Summer Students.
At the end of 1994 Tim Berners-Lee left CERN to direct the WW
Consortium (W3C), a world-wide organization devoted to leading th
Web to its full potential. The W3C was founded with the help of CERN
the European Commission, the Massachusetts Institute of Technolog
(MIT), the Institut National pour la Recherche en Informatique et e
Automatique (INRIA), and the Advanced Research Projects Agency (ARPA).
In 1995 Tim Berners-Lee and Robert Cailliau received the ACM Software Syster
Award for the World Wide Web. In 2004, Tim Berners-Lee was awarded the firs
Millenium Technology Prize by the Finnish Technology Award Fouridation.
The CERN Library
June 2004

“The trick... is to make sure that each limited mechanical part of the web, each application, is within itself composed of simple parts that will never get too powerful.”

—Tim Berners-Lee

HTTP

URLs

HTML

WWW

HTML

HTML tags

21 elements

HTML 5

121 elements

show me

<foo>
show me
</foo>

<main>
show me
</main>

<canvas>
hide me
</canvas>

<img src alt>

<img src alt srcset>

<picture>
<source srcset>
<source srcset>
<img src alt srcset>
</picture>

CSS

OOCSS

SMACSS

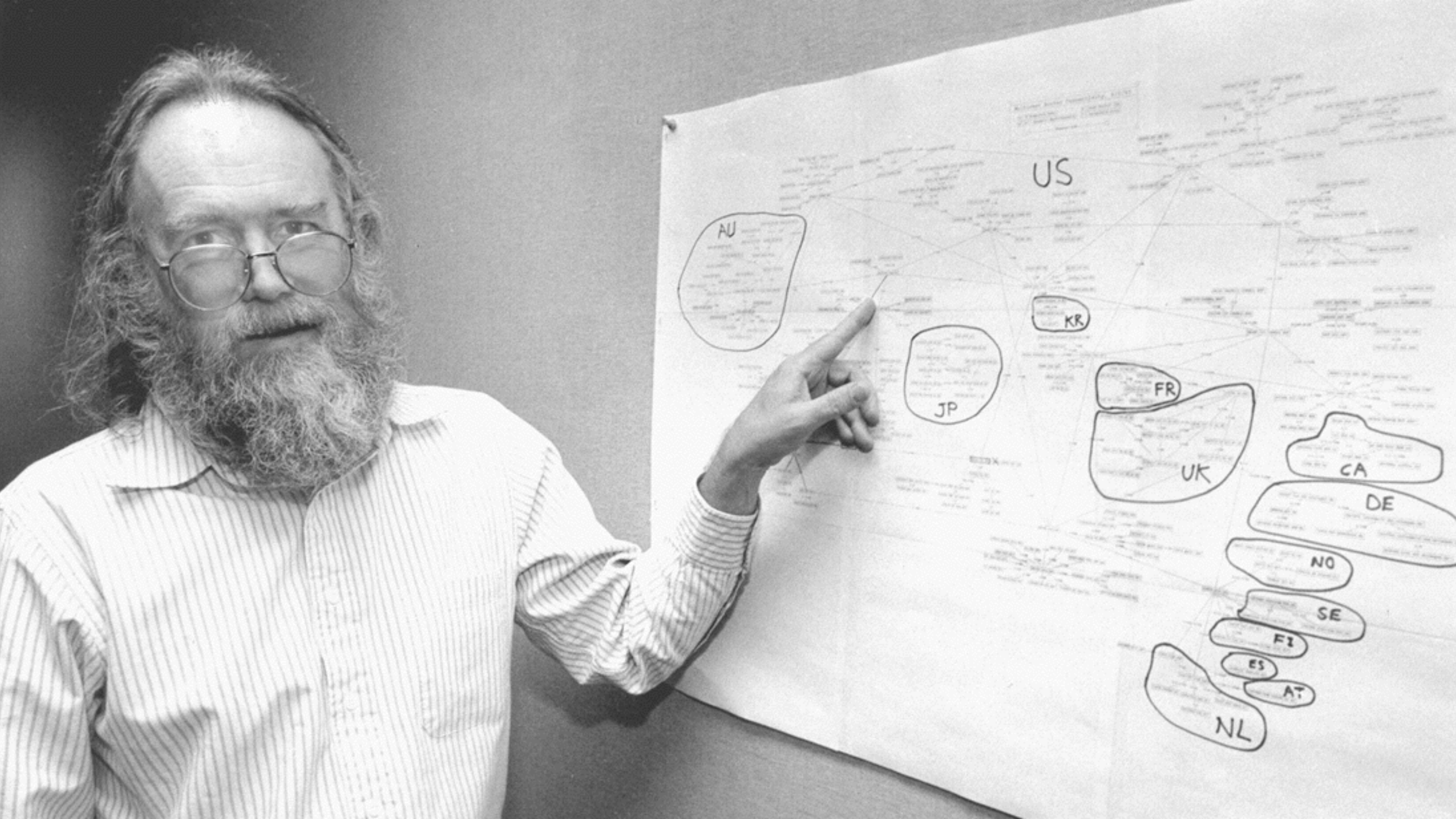
BEM

```
selector {
  property: value;
}
```

CSS
HTML

“Be conservative in what you send,
be liberal in what you accept.”

—Jon Postel


US
AU
KR
JP
FR
UK
CA
DE
NO
SE
FI
ES
AT
NL

fragile

imperative JavaScript

CSS

declarative HTML

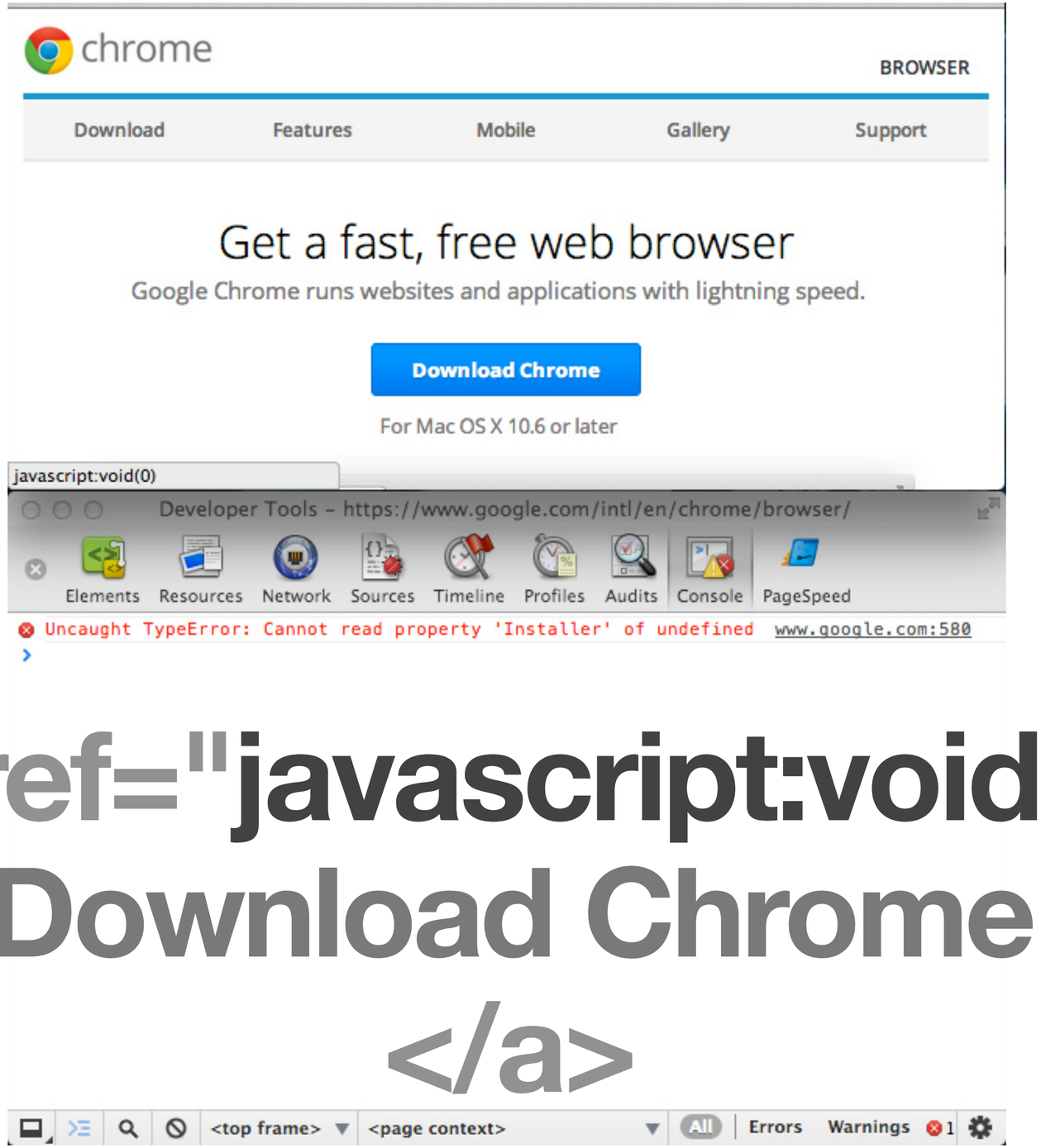
resilient

fragile

XHTML 2

fragile

JavaScript

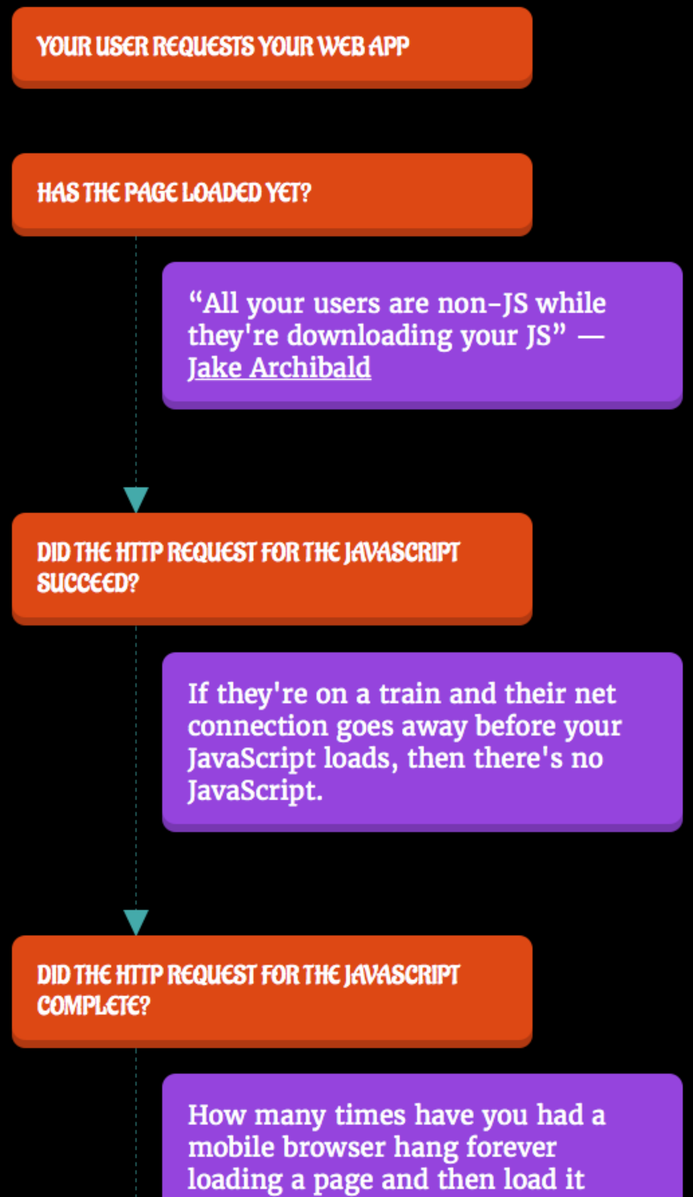


Download Chrome

“Anything that can possibly go wrong,
will go wrong.”

—Edward Aloysius Murphy, Jr.

Everyone has JavaScript, right?



FO4304OZ01
ADAC
ÖAMTC
FO4304OZ01
FO4304OZ01
0.15

1. Identify core functionality.
2. Make that functionality available using the simplest technology.
3. Enhance!

1. Identify core functionality.
2. Make that functionality available using the simplest technology.
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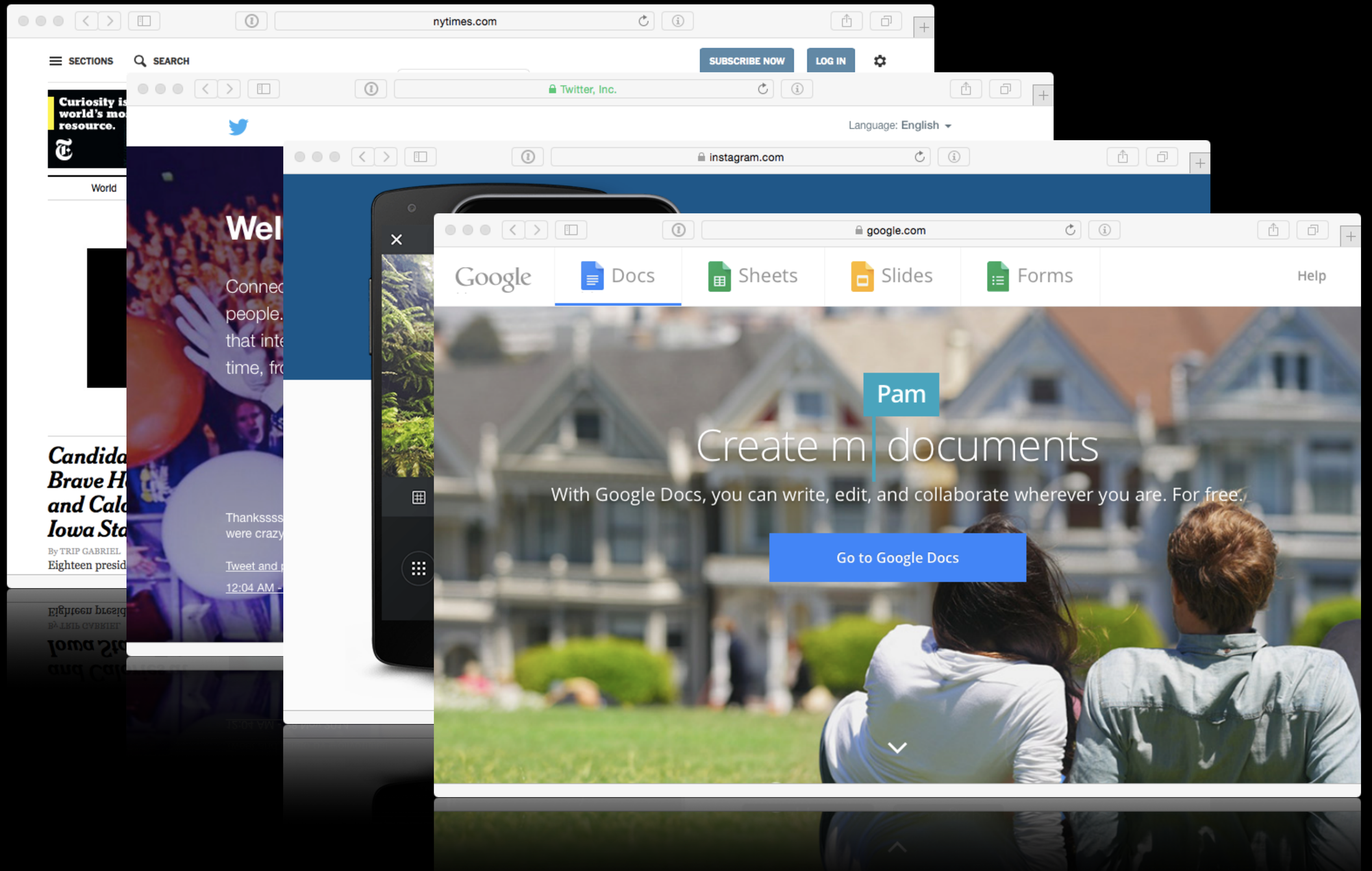
nytimes.com
SECTIONS
SEARCH
SUBSCRIBE NOW
LOG IN
Curiosity is
world's mo
resource.
World
Candida
Brave H
and Cal
Iowa Sta
By TRIP GABRIEL
Eighteen presid
Twitter, Inc.
Language: English
Wel
Connec
people.
that inte
time, fr
Thankssss
were crazy
Tweet and
12:04 AM -
instagram.com
google.com
Google
Docs
Sheets
Slides
Forms
Help
Pam
Create m documents
With Google Docs, you can write, edit, and collaborate wherever you are. For free.
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1. Identify core functionality.
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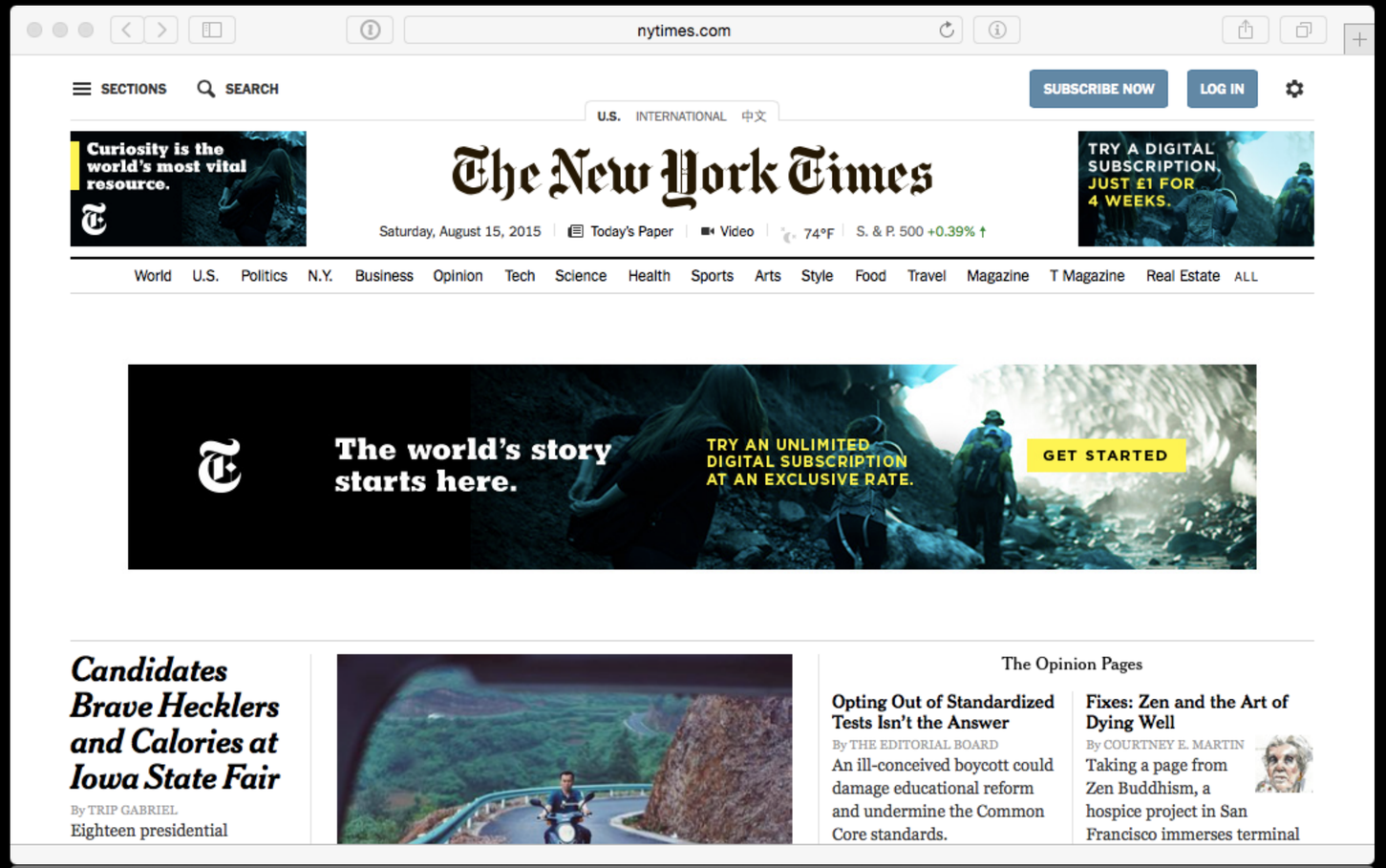
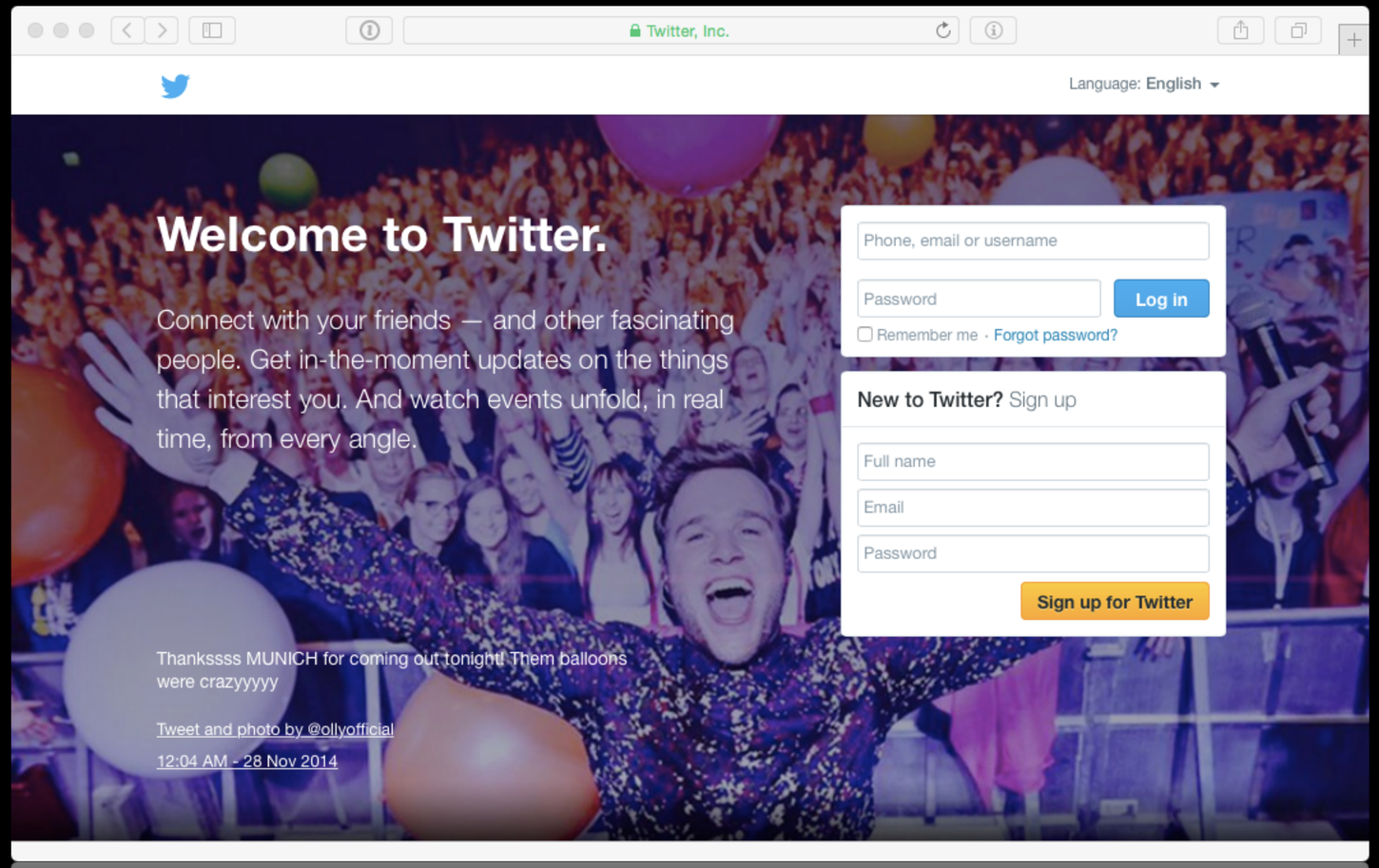
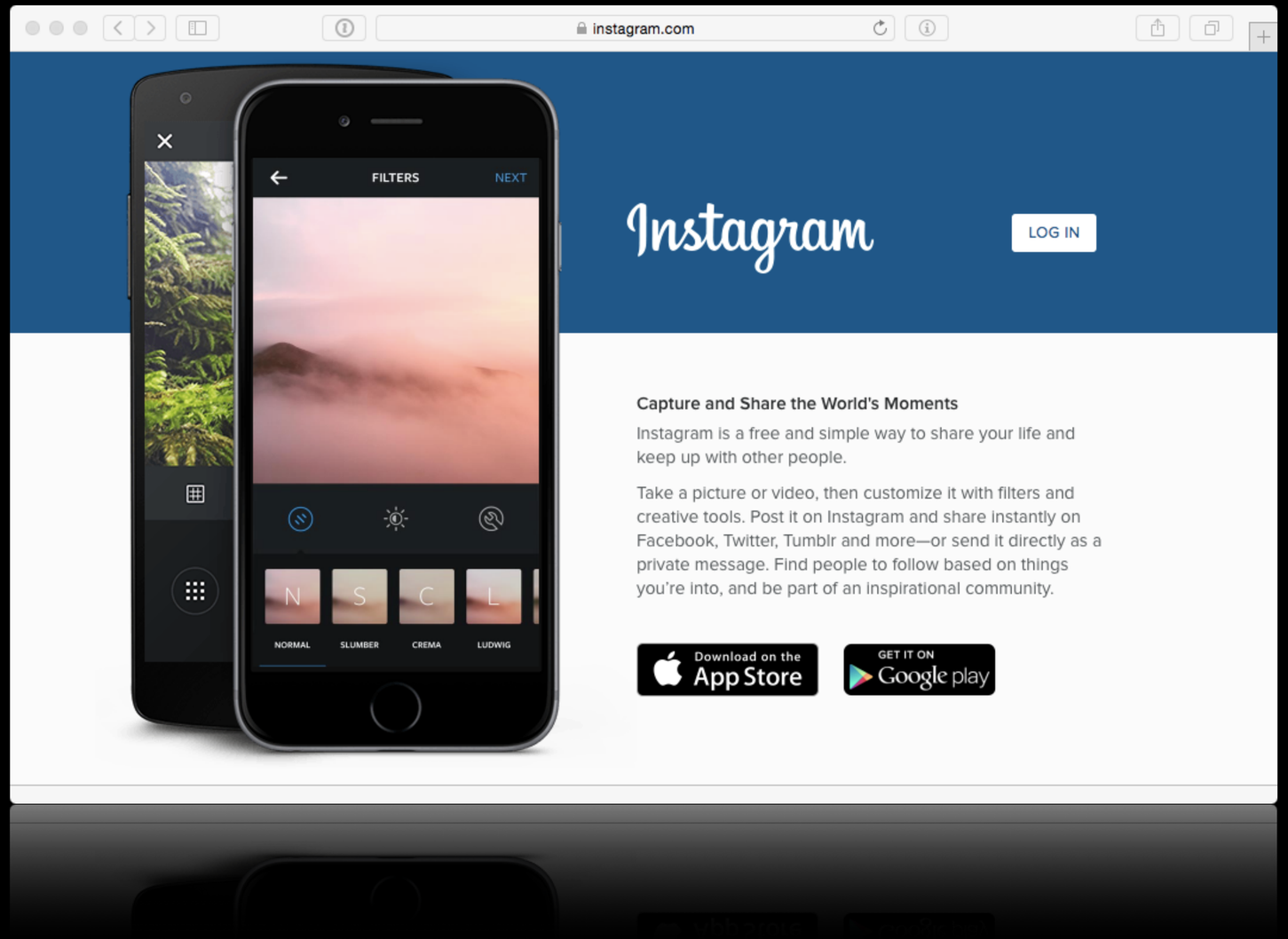


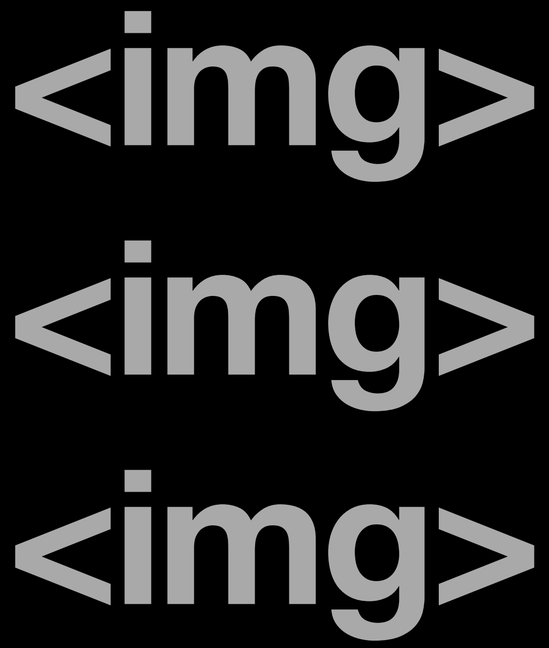
<nav>
<main>
<h1>
<p>
<article> <header> <footer>



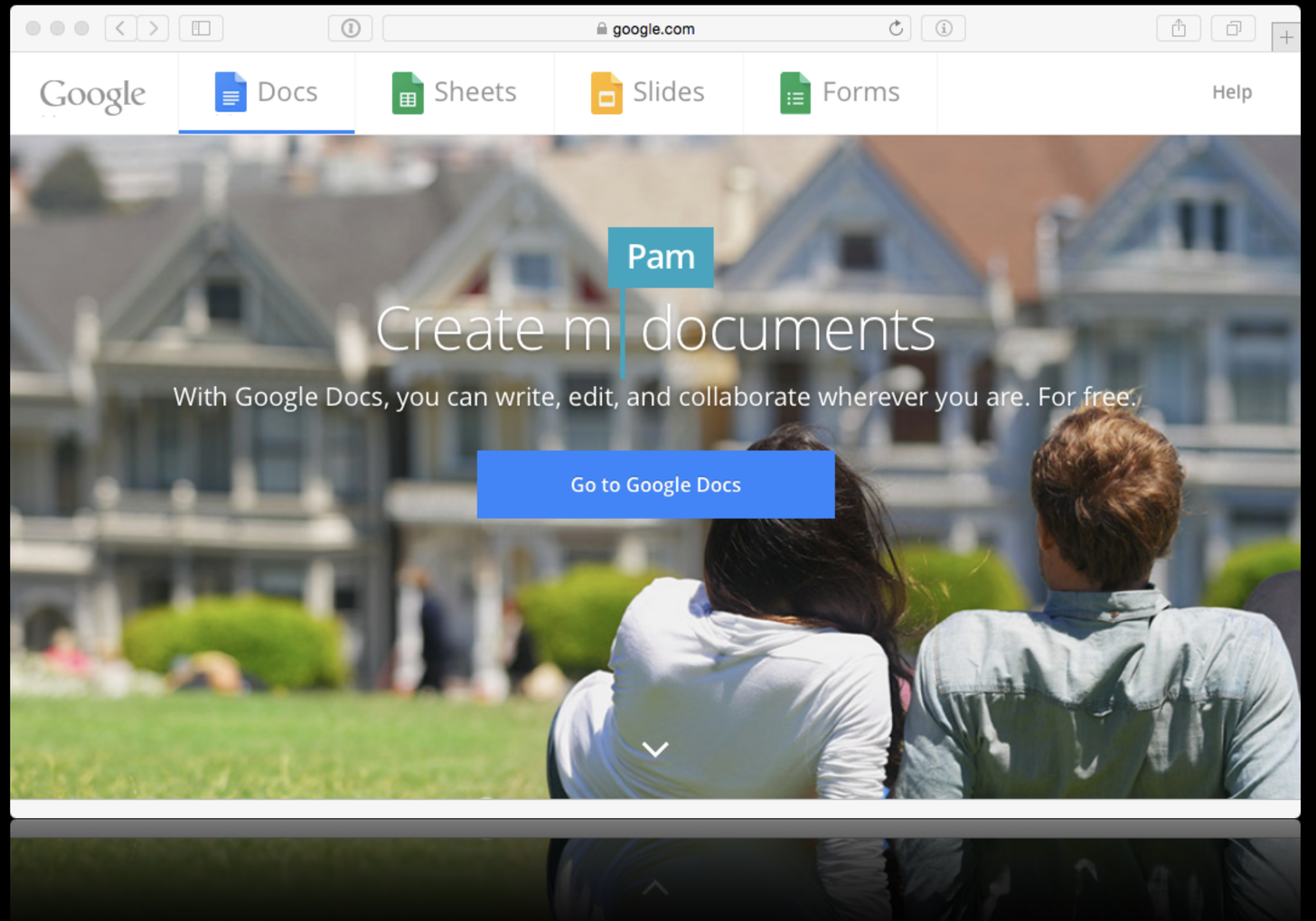
<input type="text">

<input type="file">





<textarea>


google.com
Google
Docs
Sheets
Slides
Forms
Help
Pam
Create m documents
With Google Docs, you can write, edit, and collaborate wherever you are. For free.
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1. Identify core functionality.
2. Make that functionality available using the simplest technology.
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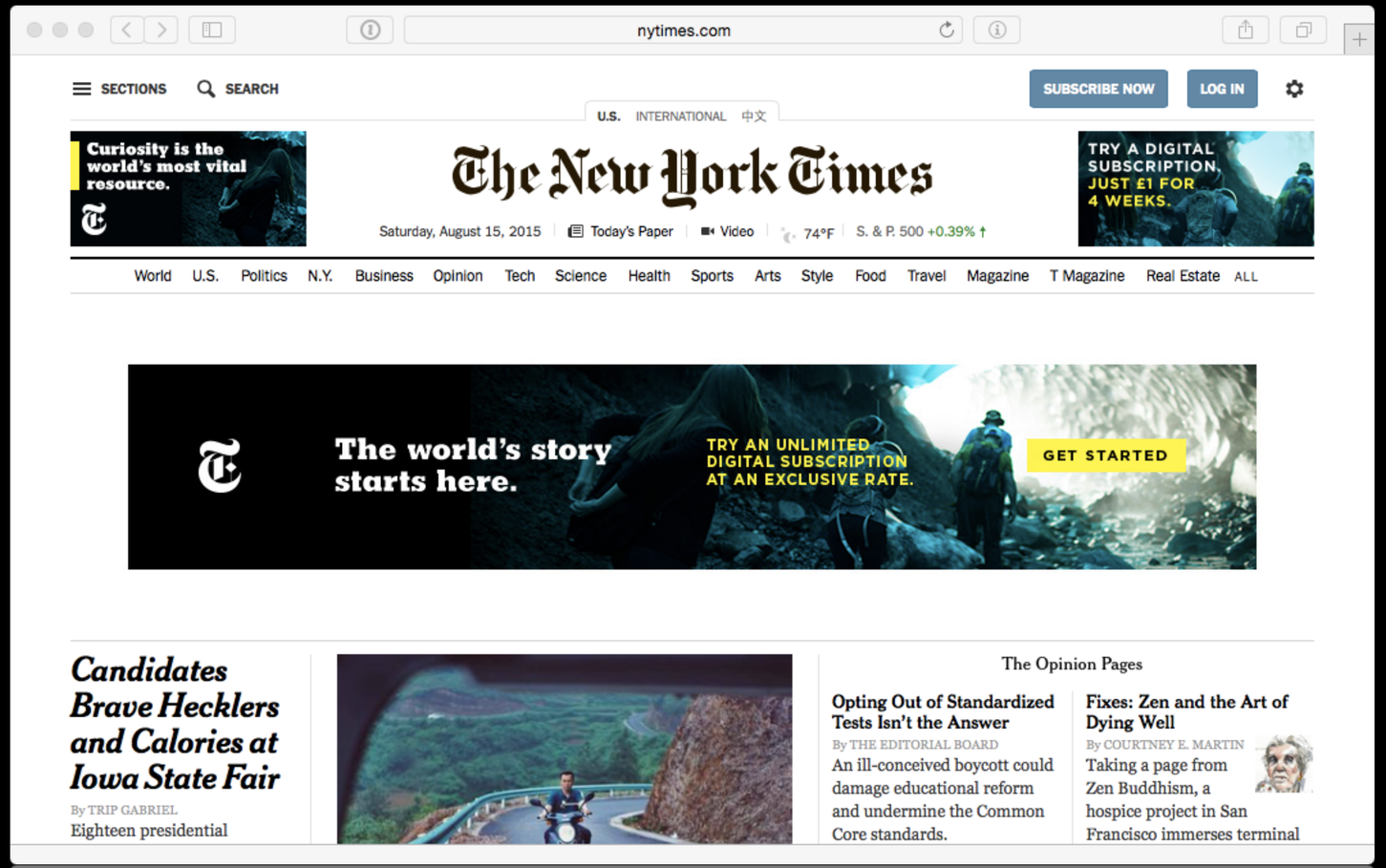
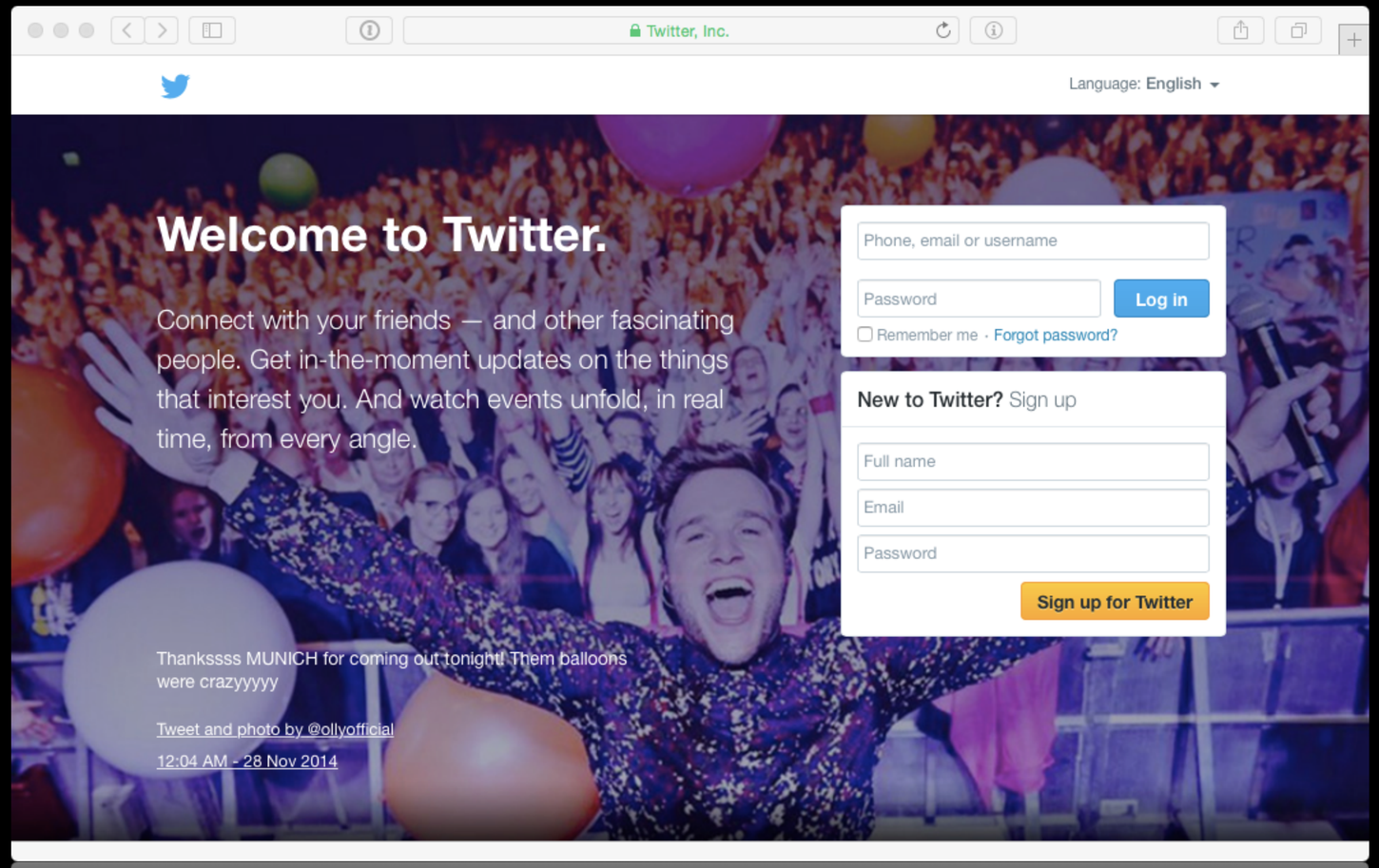


layout

@font-face

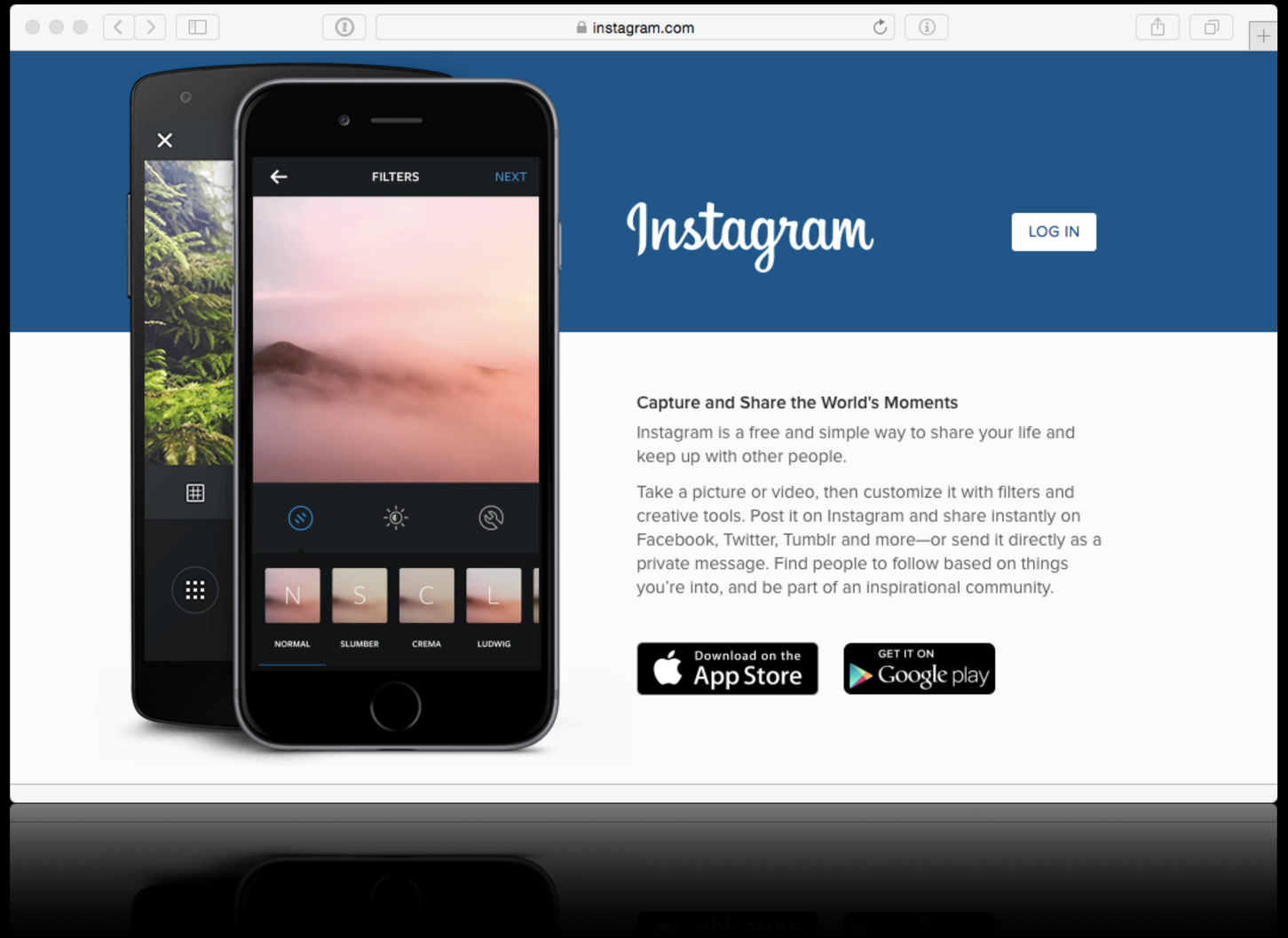


ajax

websocket

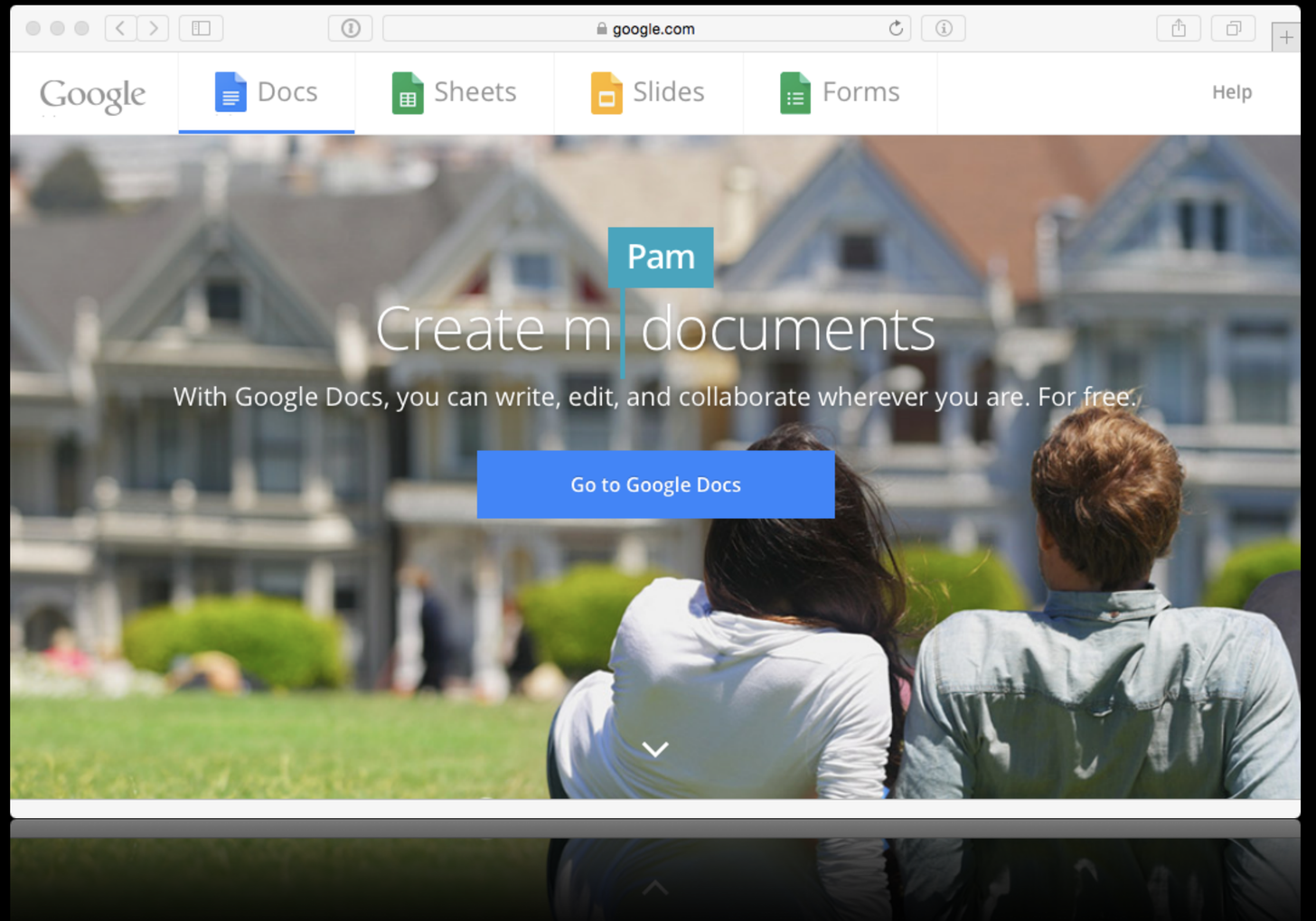
CSS filters

file API



local storage

service worker



1. Identify core functionality.
2. Make that functionality available using the simplest technology.
3. Enhance!

“This is too easy.”

“This is too hard.”

1. Identify core functionality.
2. Make that functionality available using the simplest technology.
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www.nasa.gov

Jeremy

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Space Station

Meals Ready to Eat: Expedition 44 Crew Members Sample Leafy Greens Grown on Space Station

Veggie Harvest: First Taste of History

NASA Events

Monday, Aug. 10: Russian Spacewalk at International Space Station, NASA TV, 9:45 a.m. EDT

Wednesday, Aug. 12: Watch the Skies! Perseid Meteor Shower Live UStream From NASA Marshall, 10 p.m. EDT

Calendar | Launch Schedule

NASA

NASA to Share the Universe with Tumblr Users

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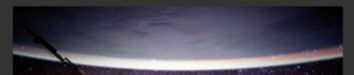
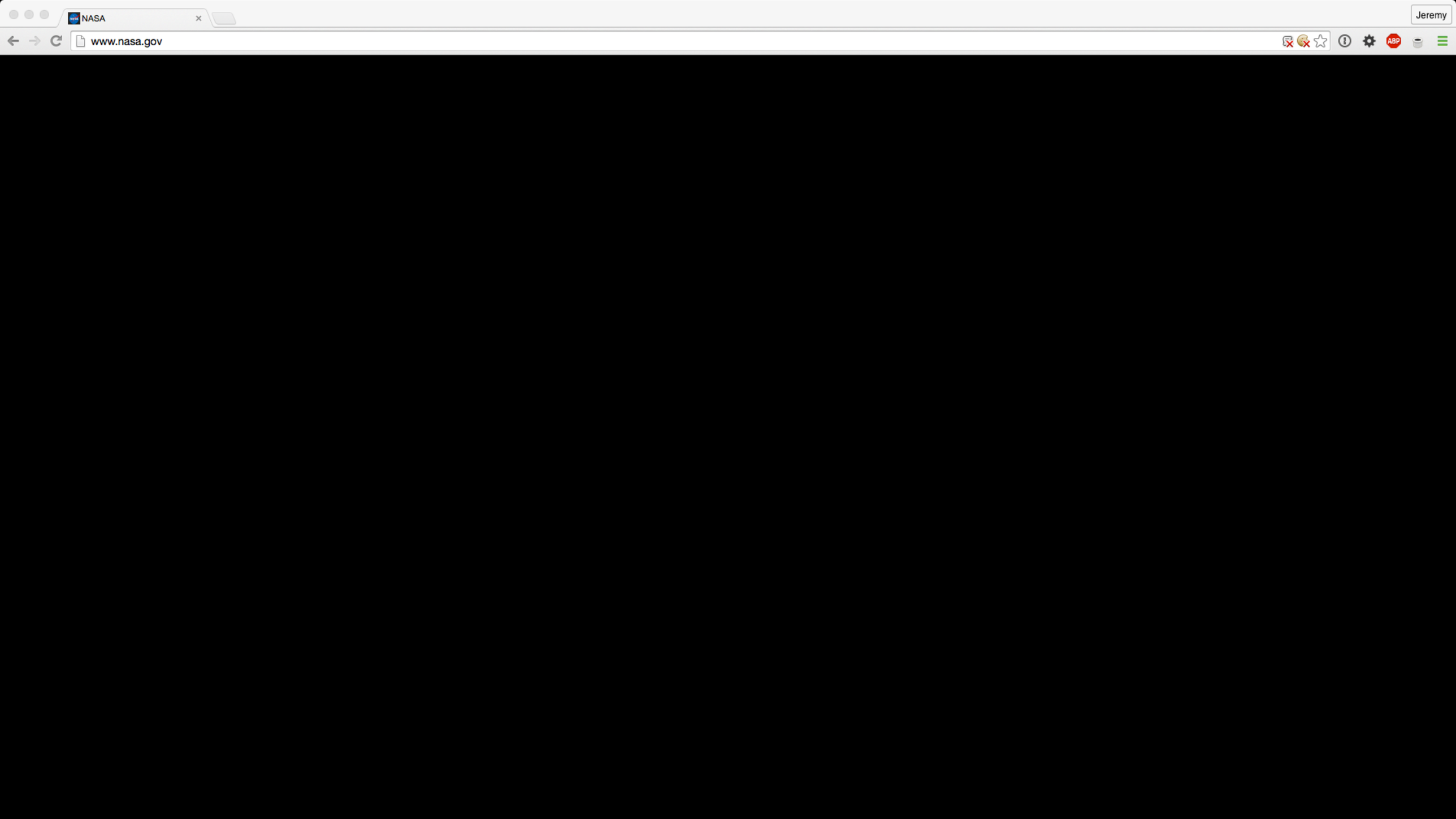
Day 135. #MilkyWay. You're old, dusty, gassy and warped. But beautiful. Good night from @space_station! #YearInSpace pic.twitter.com/4q09y5CxGJ

Retweeted by NASA

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Jeremy
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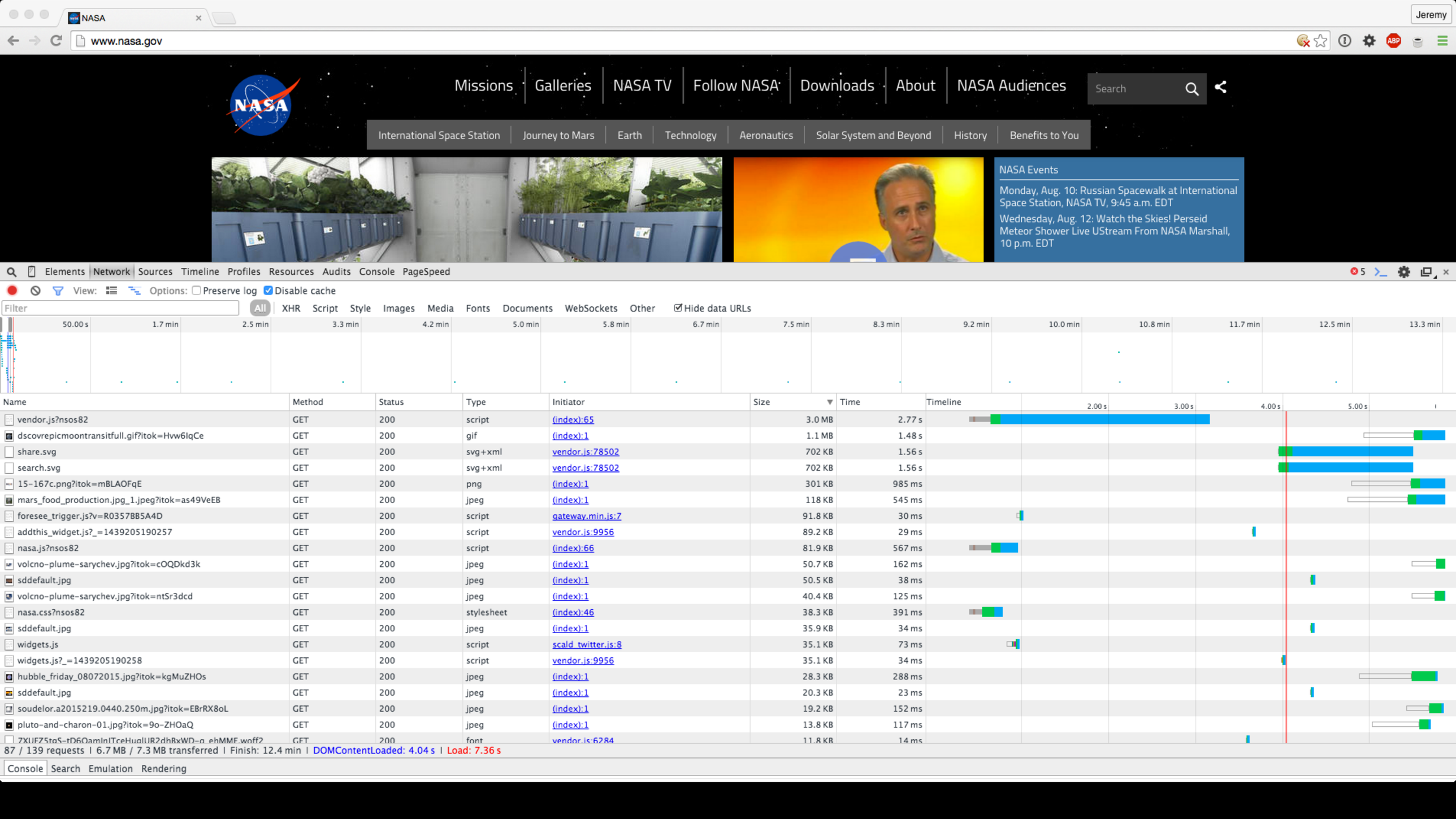
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NASA Events
Monday, Aug. 10: Russian Spacewalk at International Space Station, NASA TV, 9:45 a.m. EDT
Wednesday, Aug. 12: Watch the Skies! Perseid Meteor Shower Live UStream From NASA Marshall, 10 p.m. EDT
Elements
Network
Sources
Timeline
Profiles
Resources
Audits
Console
PageSpeed
Preserve log
Disable cache
Filter
All
XHR
Script
Style
Images
Media
Fonts
Documents
WebSockets
Other
Hide data URLs
50.00 s
1.7 min
2.5 min
3.3 min
4.2 min
5.0 min
5.8 min
6.7 min
7.5 min
8.3 min
9.2 min
10.0 min
10.8 min
11.7 min
12.5 min
13.3 min
Name
Method
Status
Type
Initiator
Size
Time
Timeline
2.00 s
3.00 s
4.00 s
5.00 s
vendor.js?nsos82 GET 200 script (index):65 3.0 MB 2.77 s
dscovrepicmoontransitfull.gif?itok=Hvw6IqCe GET 200 gif (index):1 1.1 MB 1.48 s
share.svg GET 200 svg+xml vendor.js:78502 702 KB 1.56 s
search.svg GET 200 svg+xml vendor.js:78502 702 KB 1.56 s
15-167c.png?itok=mBLAOFqE GET 200 png (index):1 301 KB 985 ms
mars_food_production.jpg_1.jpeg?itok=as49VeEB GET 200 jpeg (index):1 118 KB 545 ms
foresee_trigger.js?v=R0357BB5A4D GET 200 script gateway.min.js:7 91.8 KB 30 ms
addthis_widget.js?_=1439205190257 GET 200 script vendor.js:9956 89.2 KB 29 ms
nasa.js?nsos82 GET 200 script (index):66 81.9 KB 567 ms
volcno-plume-sarychev.jpg?itok=cOQDkd3k GET 200 jpeg (index):1 50.7 KB 162 ms
sddefault.jpg GET 200 jpeg (index):1 50.5 KB 38 ms
volcno-plume-sarychev.jpg?itok=ntSr3dcd GET 200 jpeg (index):1 40.4 KB 125 ms
nasa.css?nsos82 GET 200 stylesheet (index):46 38.3 KB 391 ms
sddefault.jpg GET 200 jpeg (index):1 35.9 KB 34 ms
widgets.js GET 200 script scald_twitter.js:8 35.1 KB 73 ms
widgets.js?_=1439205190258 GET 200 script vendor.js:9956 35.1 KB 34 ms
hubble_friday_08072015.jpg?itok=kgMuZHOs GET 200 jpeg (index):1 28.3 KB 288 ms
sddefault.jpg GET 200 jpeg (index):1 20.3 KB 23 ms
soudelor.a2015219.0440.250m.jpg?itok=EBrRX8oL GET 200 jpeg (index):1 19.2 KB 152 ms
pluto-and-charon-01.jpg?itok=9o-ZHOaQ GET 200 jpeg (index):1 13.8 KB 117 ms
87 / 139 requests | 6.7 MB / 7.3 MB transferred | Finish: 12.4 min | DOMContentLoaded: 4.04 s | Load: 7.36 s
Console
Search
Emulation
Rendering

“If you build pages with the idea that parts other than html are optional, you will create a better and stronger web page.”

—gov.uk
Government Service Design Manual

developer convenience

user needs

“Ninety percent of everything is crud.”

—Theodore Sturgeon

The tragedy of the commons

640
800
1024

216 colours

Times New Roman

Verdana

Arial

Netscape 4

IE 6

Windows XP

Android 2.x

EVERYTHING IS AMAZING
AND NOBODY'S HAPPY
quickmeme.com

With the dawn of the 21st century.

“Any sufficiently advanced technology is indistinguishable from magic.”

—Arthur C. Clarke

HTTP

URLs

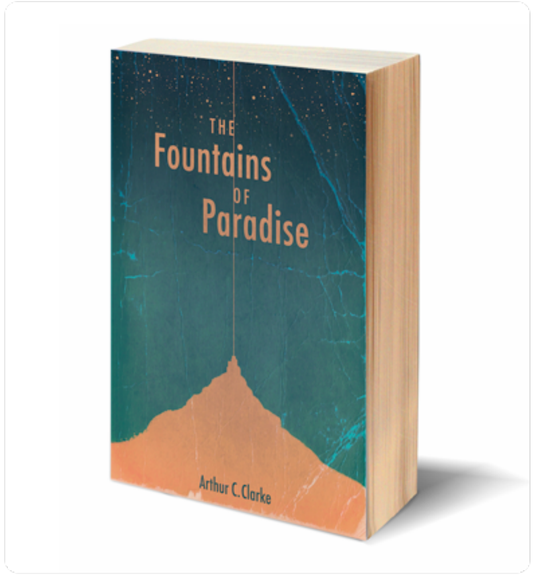
HTML

WWW

URLs

“Cool URIs don’t change.”

—Tim Berners-Lee


THE
Fountains
OF
Paradise
Arthur C. Clarke

RESILIENCE