

The background is a deep blue sky filled with soft, white, wispy clouds. A vertical streak of light, resembling a rocket launch trail, runs down the center of the image, starting from a small airplane icon at the top and extending towards the bottom.

THE LONG-TAIL OF PERFORMANCE

Tim Kadlec

#codegarden19

@tkadlec



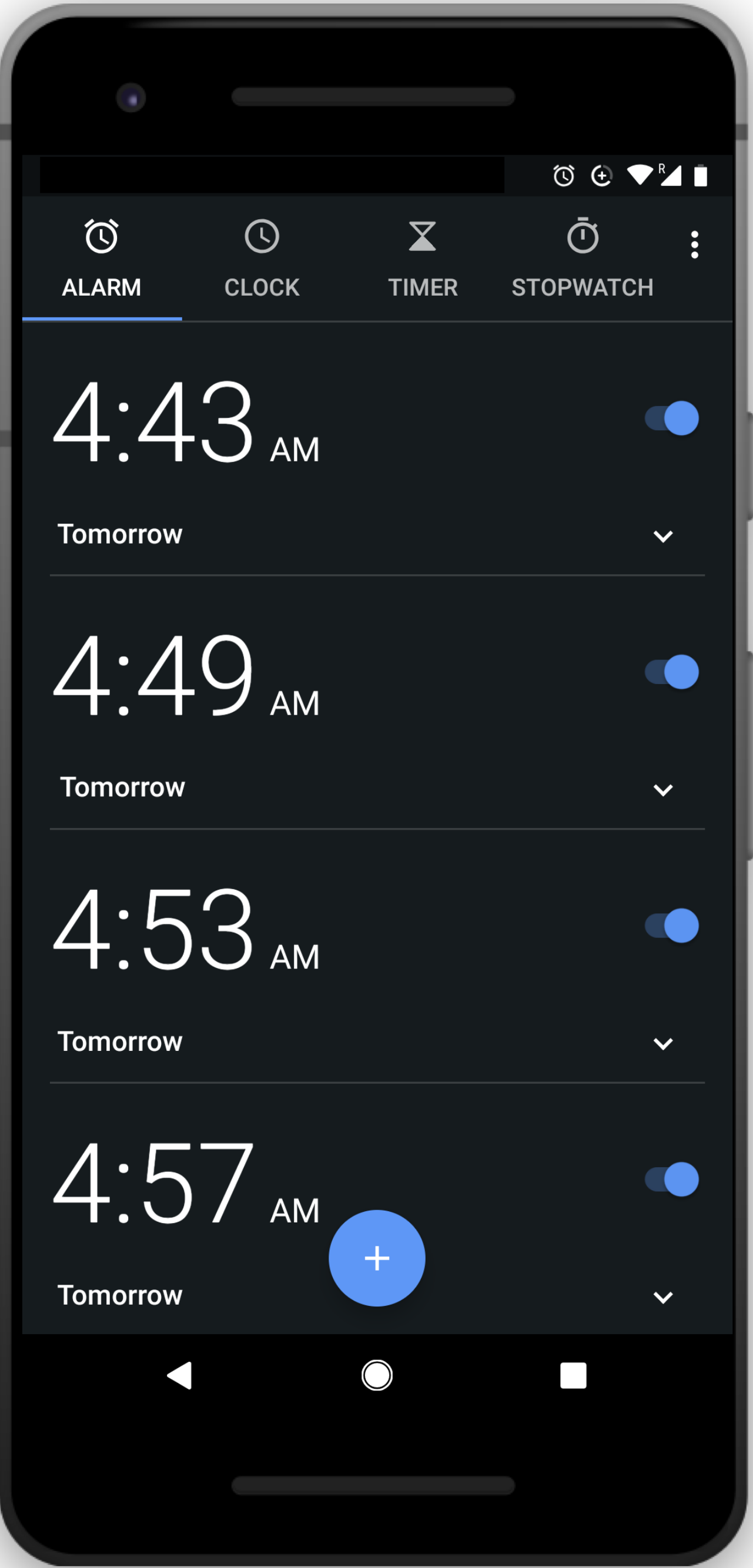
THE LONG-TAIL OF PERFORMANCE

Tim Kadlec

#codegarden19

@tkadlec





Alarm Clock Timer Stopwatch

ALARM CLOCK TIMER STOPWATCH

4:43 AM

Tomorrow

4:49 AM

Tomorrow

4:53 AM

Tomorrow

4:57 AM

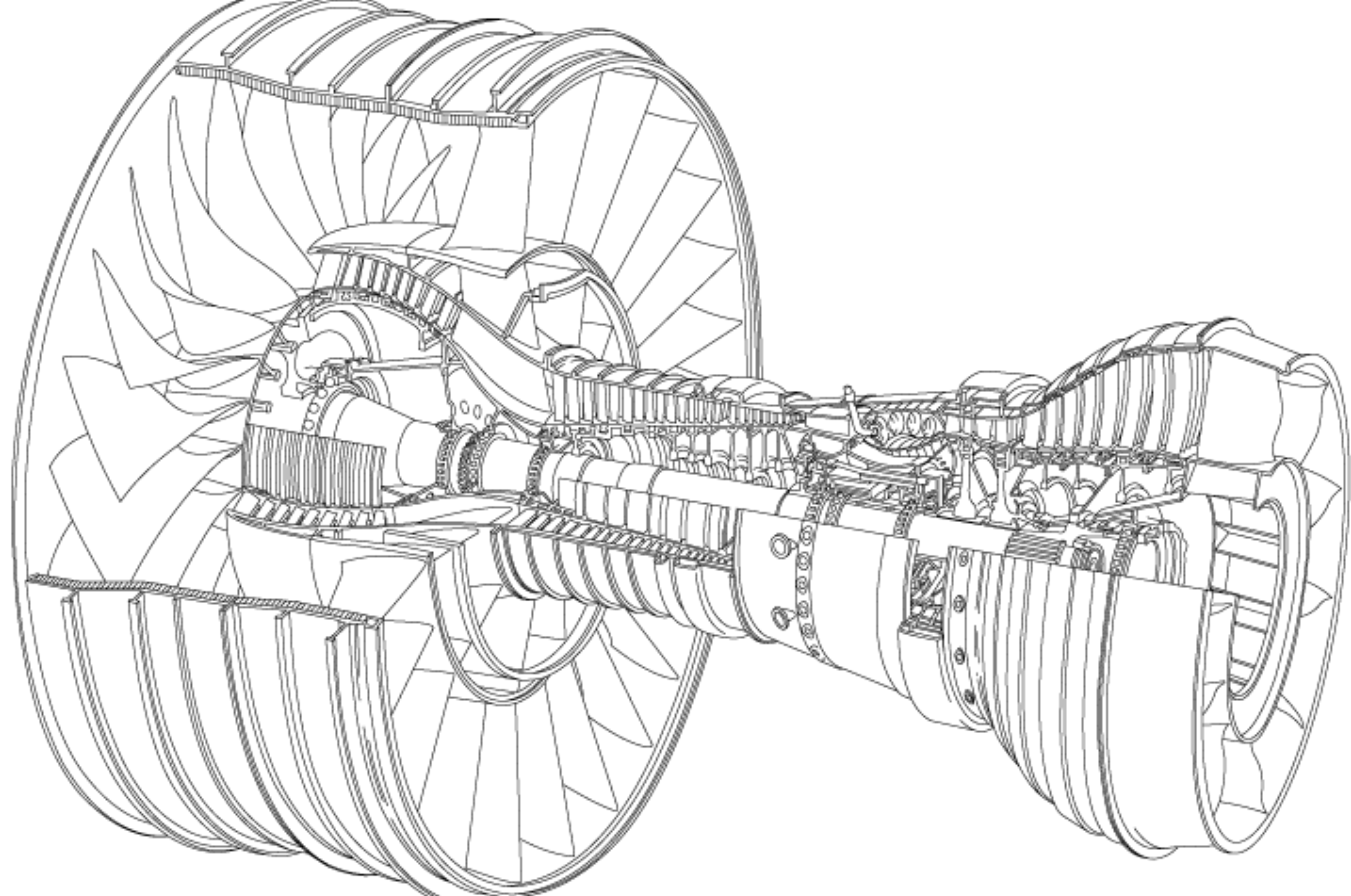
Tomorrow

+



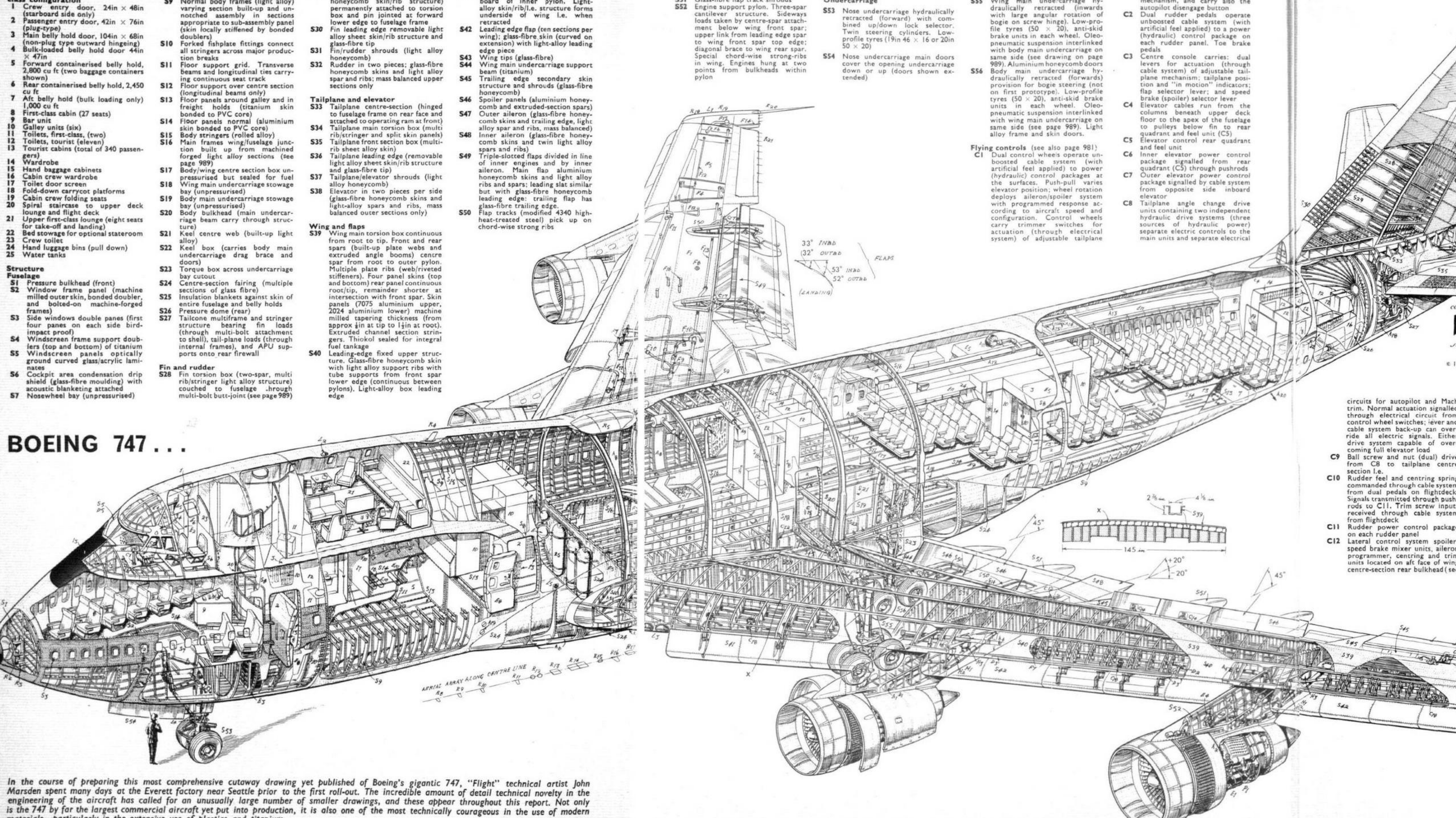
CONGRATS!
PGA
PGA AIRPORT
THIRD PLACE:
BEST CONSUMER
EXPERIENCE
CONCEPT
AWARD 2019

FLIGHT	STATUS	ORIGIN	DESTINATION	CLASS	FARE
AA123	ON TIME	LAX	JFK	Y	\$120
DL456	ON TIME	LAX	ORD	Y	\$110
UA789	ON TIME	LAX	DFW	Y	\$100
WN101	ON TIME	LAX	MDW	Y	\$90
B6202	ON TIME	LAX	BOS	Y	\$130
DL345	ON TIME	LAX	SEA	Y	\$115
AA678	ON TIME	LAX	PHX	Y	\$80
WN901	ON TIME	LAX	LAS	Y	\$70
UA234	ON TIME	LAX	SFO	Y	\$60
B6567	ON TIME	LAX	IAH	Y	\$105
DL890	ON TIME	LAX	MIA	Y	\$125
AA112	ON TIME	LAX	ATL	Y	\$118
WN334	ON TIME	LAX	DTW	Y	\$108
UA556	ON TIME	LAX	IND	Y	\$98
B6778	ON TIME	LAX	CLT	Y	\$128
DL990	ON TIME	LAX	MEM	Y	\$112
AA223	ON TIME	LAX	FTW	Y	\$102
WN445	ON TIME	LAX	CVG	Y	\$92
UA667	ON TIME	LAX	CMH	Y	\$82
B6889	ON TIME	LAX	DAY	Y	\$117
DL001	ON TIME	LAX	ABQ	Y	\$75
AA334	ON TIME	LAX	ALB	Y	\$135
WN556	ON TIME	LAX	MLB	Y	\$100
UA778	ON TIME	LAX	HSV	Y	\$95
B6990	ON TIME	LAX	RIC	Y	\$120
DL112	ON TIME	LAX	PHF	Y	\$110
AA445	ON TIME	LAX	HSV	Y	\$105
WN667	ON TIME	LAX	RIC	Y	\$95
UA889	ON TIME	LAX	PHF	Y	\$85
B6001	ON TIME	LAX	PHF	Y	\$115
DL223	ON TIME	LAX	PHF	Y	\$105
AA556	ON TIME	LAX	PHF	Y	\$95
WN778	ON TIME	LAX	PHF	Y	\$85
UA990	ON TIME	LAX	PHF	Y	\$75
B6112	ON TIME	LAX	PHF	Y	\$110
DL334	ON TIME	LAX	PHF	Y	\$100
AA667	ON TIME	LAX	PHF	Y	\$90
WN889	ON TIME	LAX	PHF	Y	\$80
UA001	ON TIME	LAX	PHF	Y	\$70
B6223	ON TIME	LAX	PHF	Y	\$105
DL445	ON TIME	LAX	PHF	Y	\$95
AA778	ON TIME	LAX	PHF	Y	\$85
WN990	ON TIME	LAX	PHF	Y	\$75
UA112	ON TIME	LAX	PHF	Y	\$65
B6334	ON TIME	LAX	PHF	Y	\$100
DL556	ON TIME	LAX	PHF	Y	\$90
AA889	ON TIME	LAX	PHF	Y	\$80
WN001	ON TIME	LAX	PHF	Y	\$70
UA223	ON TIME	LAX	PHF	Y	\$60
B6445	ON TIME	LAX	PHF	Y	\$95
DL667	ON TIME	LAX	PHF	Y	\$85
AA990	ON TIME	LAX	PHF	Y	\$75
WN112	ON TIME	LAX	PHF	Y	\$65
UA334	ON TIME	LAX	PHF	Y	\$55
B6556	ON TIME	LAX	PHF	Y	\$90
DL778	ON TIME	LAX	PHF	Y	\$80
AA001	ON TIME	LAX	PHF	Y	\$70
WN223	ON TIME	LAX	PHF	Y	\$60
UA445	ON TIME	LAX	PHF	Y	\$50
B6667	ON TIME	LAX	PHF	Y	\$85
DL889	ON TIME	LAX	PHF	Y	\$75
AA112	ON TIME	LAX	PHF	Y	\$65
WN334	ON TIME	LAX	PHF	Y	\$55
UA556	ON TIME	LAX	PHF	Y	\$45
B6778	ON TIME	LAX	PHF	Y	\$80
DL990	ON TIME	LAX	PHF	Y	\$70
AA223	ON TIME	LAX	PHF	Y	\$60
WN445	ON TIME	LAX	PHF	Y	\$50
UA667	ON TIME	LAX	PHF	Y	\$40
B6889	ON TIME	LAX	PHF	Y	\$75
DL001	ON TIME	LAX	PHF	Y	\$65
AA334	ON TIME	LAX	PHF	Y	\$55
WN556	ON TIME	LAX	PHF	Y	\$45
UA778	ON TIME	LAX	PHF	Y	\$35
B6990	ON TIME	LAX	PHF	Y	\$70
DL112	ON TIME	LAX	PHF	Y	\$60
AA445	ON TIME	LAX	PHF	Y	\$50
WN667	ON TIME	LAX	PHF	Y	\$40
UA889	ON TIME	LAX	PHF	Y	\$30
B6001	ON TIME	LAX	PHF	Y	\$65
DL223	ON TIME	LAX	PHF	Y	\$55
AA556	ON TIME	LAX	PHF	Y	\$45
WN778	ON TIME	LAX	PHF	Y	\$35
UA990	ON TIME	LAX	PHF	Y	\$25
B6112	ON TIME	LAX	PHF	Y	\$60
DL334	ON TIME	LAX	PHF	Y	\$50
AA667	ON TIME	LAX	PHF	Y	\$40
WN889	ON TIME	LAX	PHF	Y	\$30
UA001	ON TIME	LAX	PHF	Y	\$20
B6223	ON TIME	LAX	PHF	Y	\$55
DL445	ON TIME	LAX	PHF	Y	\$45
AA778	ON TIME	LAX	PHF	Y	\$35
WN990	ON TIME	LAX	PHF	Y	\$25
UA112	ON TIME	LAX	PHF	Y	\$15
B6334	ON TIME	LAX	PHF	Y	\$50
DL556	ON TIME	LAX	PHF	Y	\$40
AA889	ON TIME	LAX	PHF	Y	\$30
WN001	ON TIME	LAX	PHF	Y	\$20
UA223	ON TIME	LAX	PHF	Y	\$10
B6445	ON TIME	LAX	PHF	Y	\$45
DL667	ON TIME	LAX	PHF	Y	\$35
AA990	ON TIME	LAX	PHF	Y	\$25
WN112	ON TIME	LAX	PHF	Y	\$15
UA334	ON TIME	LAX	PHF	Y	\$5
B6556	ON TIME	LAX	PHF	Y	\$40
DL778	ON TIME	LAX	PHF	Y	\$30
AA001	ON TIME	LAX	PHF	Y	\$20
WN223	ON TIME	LAX	PHF	Y	\$10
UA445	ON TIME	LAX	PHF	Y	\$0
B6667	ON TIME	LAX	PHF	Y	\$35
DL889	ON TIME	LAX	PHF	Y	\$25
AA112	ON TIME	LAX	PHF	Y	\$15
WN334	ON TIME	LAX	PHF	Y	\$5
UA556	ON TIME	LAX	PHF	Y	\$0
B6778	ON TIME	LAX	PHF	Y	\$30
DL990	ON TIME	LAX	PHF	Y	\$20
AA223	ON TIME	LAX	PHF	Y	\$10
WN445	ON TIME	LAX	PHF	Y	\$0
UA667	ON TIME	LAX	PHF	Y	\$0
B6889	ON TIME	LAX	PHF	Y	\$25
DL001	ON TIME	LAX	PHF	Y	\$15
AA334	ON TIME	LAX	PHF	Y	\$5
WN556	ON TIME	LAX	PHF	Y	\$0
UA778	ON TIME	LAX	PHF	Y	\$0
B6990	ON TIME	LAX	PHF	Y	\$20
DL112	ON TIME	LAX	PHF	Y	\$10
AA445	ON TIME	LAX	PHF	Y	\$0
WN667	ON TIME	LAX	PHF	Y	\$0
UA889	ON TIME	LAX	PHF	Y	\$0
B6001	ON TIME	LAX	PHF	Y	\$15
DL223	ON TIME	LAX	PHF	Y	\$5
AA556	ON TIME	LAX	PHF	Y	\$0
WN778	ON TIME	LAX	PHF	Y	\$0
UA990	ON TIME	LAX	PHF	Y	\$0
B6112	ON TIME	LAX	PHF	Y	\$10
DL334	ON TIME	LAX	PHF	Y	\$0
AA667	ON TIME	LAX	PHF	Y	\$0
WN889	ON TIME	LAX	PHF	Y	\$0
UA001	ON TIME	LAX	PHF	Y	\$0
B6223	ON TIME	LAX	PHF	Y	\$5
DL445	ON TIME	LAX	PHF	Y	\$0
AA778	ON TIME	LAX	PHF	Y	\$0
WN990	ON TIME	LAX	PHF	Y	\$0
UA112	ON TIME	LAX	PHF	Y	\$0
B6334	ON TIME	LAX	PHF	Y	\$0
DL556	ON TIME	LAX	PHF	Y	\$0
AA889	ON TIME	LAX	PHF	Y	\$0
WN001	ON TIME	LAX	PHF	Y	\$0
UA223	ON TIME	LAX	PHF	Y	\$0
B6445	ON TIME	LAX	PHF	Y	\$0
DL667	ON TIME	LAX	PHF	Y	\$0
AA990	ON TIME	LAX	PHF	Y	\$0
WN112	ON TIME	LAX	PHF	Y	\$0
UA334	ON TIME	LAX	PHF	Y	\$0
B6556	ON TIME	LAX	PHF	Y	\$0
DL778	ON TIME	LAX	PHF	Y	\$0
AA001	ON TIME	LAX	PHF	Y	\$0
WN223	ON TIME	LAX	PHF	Y	\$0
UA445	ON TIME	LAX	PHF	Y	\$0
B6667	ON TIME	LAX	PHF	Y	\$0
DL889	ON TIME	LAX	PHF	Y	\$0
AA112	ON TIME	LAX	PHF	Y	\$0
WN334	ON TIME	LAX	PHF	Y	\$0
UA556	ON TIME	LAX	PHF	Y	\$0
B6778	ON TIME	LAX	PHF	Y	\$0
DL990	ON TIME	LAX	PHF	Y	\$0
AA223	ON TIME	LAX	PHF	Y	\$0
WN445	ON TIME	LAX	PHF	Y	\$0
UA667	ON TIME	LAX	PHF	Y	\$0
B6889	ON TIME	LAX	PHF	Y	\$0
DL001	ON TIME	LAX	PHF	Y	\$0
AA334	ON TIME	LAX	PHF	Y	\$0
WN556	ON TIME	LAX	PHF	Y	\$0
UA778	ON TIME	LAX	PHF	Y	\$0
B6990	ON TIME	LAX	PHF	Y	\$0
DL112	ON TIME	LAX	PHF	Y	\$0
AA445	ON TIME	LAX	PHF	Y	\$0
WN667	ON TIME	LAX	PHF	Y	\$0
UA889	ON TIME	LAX	PHF	Y	\$0
B6001	ON TIME	LAX	PHF	Y	\$0
DL223	ON TIME	LAX	PHF	Y	\$0
AA556	ON TIME	LAX	PHF	Y	\$0
WN778	ON TIME	LAX	PHF	Y	\$0
UA990	ON TIME	LAX	PHF	Y	\$0
B6112	ON TIME	LAX	PHF	Y	\$0
DL334	ON TIME	LAX	PHF	Y	\$0
AA667	ON TIME	LAX	PHF	Y	\$0
WN889	ON TIME	LAX	PHF	Y	\$0
UA001	ON TIME	LAX	PHF	Y	\$0
B6223	ON TIME	LAX	PHF	Y	\$0
DL445	ON TIME	LAX	PHF	Y	\$0
AA778	ON TIME	LAX	PHF	Y	\$0
WN990	ON TIME	LAX	PHF	Y	\$0
UA112	ON TIME	LAX	PHF	Y	\$0
B6334	ON TIME	LAX	PHF	Y	\$0
DL556	ON TIME	LAX	PHF	Y	\$0
AA889	ON TIME	LAX	PHF	Y	\$0
WN001	ON TIME	LAX	PHF	Y	\$0
UA223	ON TIME	LAX	PHF	Y	\$0
B6445	ON TIME	LAX	PHF	Y	\$0
DL667	ON TIME	LAX	PHF	Y	\$0
AA990	ON TIME	LAX	PHF	Y	\$0
WN112	ON TIME	LAX	PHF	Y	\$0
UA334	ON TIME	LAX	PHF	Y	\$0
B6556	ON TIME	LAX	PHF	Y	\$0
DL778	ON TIME	LAX	PHF	Y	\$0
AA001	ON TIME	LAX	PHF	Y	\$0
WN223	ON TIME	LAX	PHF	Y	\$0
UA445	ON TIME	LAX	PHF	Y	\$0
B6667	ON TIME	LAX	PHF	Y	\$0
DL889	ON TIME	LAX	PHF	Y	\$0
AA112	ON TIME	LAX	PHF	Y	\$0
WN334	ON TIME	LAX	PHF	Y	\$0
UA556	ON TIME	LAX	PHF	Y	\$0
B6778	ON TIME	LAX	PHF	Y	\$0
DL990	ON TIME	LAX	PHF	Y	\$0
AA223	ON TIME	LAX	PHF	Y	\$0
WN445	ON TIME	LAX	PHF	Y	\$0
UA667	ON TIME	LAX	PHF	Y	\$0
B6889	ON TIME	LAX	PHF	Y	\$0
DL001	ON TIME	LAX	PHF	Y	\$0
AA334	ON TIME	LAX	PHF	Y	\$0
WN556	ON TIME	LAX	PHF	Y	\$0
UA778	ON TIME	LAX	PHF	Y	\$0
B6990	ON TIME	LAX	PHF	Y	\$0
DL112	ON TIME	LAX	PHF	Y	\$0
AA445	ON TIME	LAX	PHF	Y	\$0
WN667	ON TIME	LAX	PHF	Y	\$0
UA889	ON TIME	LAX	PHF	Y	\$0
B6001	ON TIME	LAX	PHF	Y	\$0
DL223	ON TIME	LAX	PHF	Y	\$0
AA556	ON TIME	LAX	PHF	Y	\$0
WN778	ON TIME	LAX	PHF	Y	\$0
UA990	ON TIME	LAX	PHF	Y	\$0
B6112	ON TIME	LAX	PHF	Y	\$0
DL334	ON TIME	LAX	PHF	Y	\$0
AA667	ON TIME	LAX	PHF	Y	\$0
WN889	ON TIME	LAX	PHF	Y	\$0
UA001	ON TIME	LAX	PHF	Y	\$0
B6223	ON TIME	LAX	PHF	Y	\$0
DL445	ON TIME	LAX	PHF	Y	\$0
AA778	ON TIME	LAX	PHF	Y	\$0
WN990	ON TIME	LAX	PHF	Y	\$0
UA112	ON TIME	LAX	PHF	Y	\$0
B6334	ON TIME	LAX	PHF	Y	\$0
DL556	ON TIME	LAX	PHF	Y	\$0
AA889	ON TIME	LAX	PHF	Y	\$0
WN001	ON TIME	LAX	PHF	Y	\$0
UA223	ON TIME	LAX	PHF	Y	\$0
B6445	ON TIME	LAX	PHF	Y	\$0
DL667	ON TIME	LAX	PHF	Y	\$0
AA990	ON TIME	LAX	PHF	Y	\$0
WN112	ON TIME	LAX	PHF	Y	\$0
UA334	ON TIME	LAX	PHF	Y	\$0
B6556	ON TIME	LAX	PHF	Y	\$0
DL778	ON TIME	LAX	PHF	Y	\$0
AA001	ON TIME	LAX	PHF	Y	\$0
WN223	ON TIME	LAX	PHF	Y	\$0
UA445	ON TIME	LAX	PHF	Y	\$0
B6667	ON TIME	LAX	PHF	Y	\$0
DL889	ON TIME	LAX	PHF	Y	\$0
AA112	ON TIME	LAX	PHF	Y	\$0
WN334	ON TIME	LAX	PHF	Y	\$0
UA556	ON TIME	LAX	PHF	Y	\$0
B6778	ON TIME	LAX	PHF	Y	\$0
DL990	ON TIME	LAX	PHF	Y	\$0
AA223	ON TIME	LAX	PHF	Y	\$0
WN445	ON TIME	LAX	PHF	Y	\$0
UA667	ON TIME	LAX	PHF	Y	\$0
B6889	ON TIME	LAX			





VIRGINIA
WVU-9238
JAN 18



BOEING 747...

In the course of preparing this most comprehensive cutaway drawing yet published of Boeing's gigantic 747, "Flight" technical artist John Marsden spent many days at the Everett factory near Seattle prior to the first roll-out. The incredible amount of detail technical novelty in the engineering of the aircraft has called for an unusually large number of smaller drawings, and these appear throughout this report. Not only is the 747 by far the largest commercial aircraft yet put into production, it is also one of the most technically courageous in the use of modern materials—particularly in the extensive use of plastics and titanium.

- 1 Crew entry door, 24in x 48in (starboard side only)
 - 2 Passenger entry door, 42in x 76in (plug-type)
 - 3 Main belly hold door, 104in x 68in (non-plug type outward hinging)
 - 4 Bulk-loaded belly hold door 44in x 47in
 - 5 Forward containerised belly hold, 2,800 cu ft (two baggage containers shown)
 - 6 Rear containerised belly hold, 2,450 cu ft
 - 7 Aft belly hold (bulk loading only) 1,000 cu ft
 - 8 First-class cabin (27 seats)
 - 9 Bar unit
 - 10 Galley units (six)
 - 11 Toilets, first-class, (two)
 - 12 Toilets, tourist (eleven)
 - 13 Tourist cabins (total of 340 passengers)
 - 14 Wardrobe
 - 15 Hand baggage cabinets
 - 16 Cabin crew wardrobe
 - 17 Toilet door screen
 - 18 Fold-down carrycot platforms
 - 19 Cabin crew folding seats
 - 20 Spiral staircase to upper deck lounge and flight deck
 - 21 Upper first-class lounge (eight seats for take-off and landing)
 - 22 Bed stowage for optional stateroom
 - 23 Crew toilet
 - 24 Hand luggage bins (pull down)
 - 25 Water tanks
- Structure**
- Fuselage**
- S1 Pressure bulkhead (front)
 - S2 Window frame panel (machine milled outer skin, bonded doubler, and bolted-on machine-forged frames)
 - S3 Side windows double panes (first four panes on each side bird-impact proof)
 - S4 Windscreen frame support doublers (top and bottom) of titanium
 - S5 Windscreen panels optically ground curved glass/acrylic laminates
 - S6 Cockpit area condensation drip shield (glass-fibre moulding) with acoustic blanketing attached
 - S7 Nosewheel bay (unpressurised)
 - S9 Normal body frames (light alloy) varying section built-up and un-notched assembly in sections appropriate to sub-assembly panel (skin locally stiffened by bonded doublers)
 - S10 Forked fishplate fittings connect all stringers across major production breaks
 - S11 Floor support grid. Transverse beams and longitudinal ties carrying continuous seat track
 - S12 Floor support over centre section (longitudinal beams only)
 - S13 Floor panels around galley and in freight holds (titanium skin bonded to PVC core)
 - S14 Floor panels normal (aluminium skin bonded to PVC core)
 - S15 Body stringers (rolled alloy)
 - S16 Main frames wing/fuselage junction built up from machined forged light alloy sections (see page 989)
 - S17 Body/wing centre section box unpressurised but sealed for fuel
 - S18 Wing main undercarriage stowage bay (unpressurised)
 - S19 Body main undercarriage stowage bay (unpressurised)
 - S20 Body bulkhead (main undercarriage beam carry through structure)
 - S21 Keel centre web (built-up light alloy)
 - S22 Keel box (carries body main undercarriage drag brace and doors)
 - S23 Torque box across undercarriage bay cutout
 - S24 Centre-section fairing (multiple sections of glass fibre)
 - S25 Insulation blankets against skin of entire fuselage and belly holds
 - S26 Pressure dome (rear)
 - S27 Tailcone multiframe and stringer structure bearing fin loads (through multi-bolt attachment to shell), tail-plane loads (through internal frames), and APU supports onto rear firewall
- Fin and rudder**
- S28 Fin torsion box (two-spar, multi rib/stringer light alloy structure) couched to fuselage through multi-bolt butt-joint (see page 989)
- Wing and flaps**
- S39 Wing main torsion box continuous from root to tip. Front and rear spars (built-up plate webs and extruded angle booms) centre spar from root to outer pylon. Multiple plate ribs (web/riveted stiffeners). Four panel skins (top and bottom) rear panel continuous root/tip, remainder shorter at intersection with front spar. Skin panels (7075 aluminium upper, 2024 aluminium lower) machine milled tapering thickness (from approx 1/4in at tip to 1 1/2in at root). Extruded channel section stringers. Thiokol sealed for integral fuel tankage
 - S40 Leading-edge fixed upper structure. Glass-fibre honeycomb skin with light alloy support ribs with tube supports from front spar lower edge (continuous between pylons). Light-alloy box leading edge
 - S41 Wing main undercarriage support beam (titanium)
 - S42 Leading edge flap (ten sections per wing); glass-fibre skin (curved on extension) with light-alloy leading edge piece
 - S43 Wing tips (glass-fibre)
 - S44 Trailing edge secondary skin structure and shrouds (glass-fibre honeycomb)
 - S45 Spoiler panels (aluminium honeycomb and extruded-section spars)
 - S46 Outer aileron (glass-fibre honeycomb skins and trailing edge, light alloy spar and ribs, mass balanced)
 - S47 Inner aileron (glass-fibre honeycomb skins and twin light alloy spars and ribs)
 - S48 Triple-slotted flaps divided in line of inner engines and by inner aileron. Main flap aluminium honeycomb skins and light alloy ribs and spars; leading slat similar but with glass-fibre honeycomb leading edge; trailing flap has glass-fibre trailing edge
 - S49 Flap tracks (modified 4340 high-heat-treated steel) pick up on chord-wise strong ribs
 - S50 Engine support pylon. Three-spar cantilever structure. Sideways loads taken by centre-spar attachment below wing front spar; upper link from leading edge spar to wing front spar top edge; diagonal brace to wing rear spar. Special chord-wise strong-ribs in wing. Engines hung at two points from bulkheads within pylon
 - S51 Vwing main undercarriage hydraulically retracted (inwards with large angular rotation of bogie on screw hinge). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with body main undercarriage on same side (see drawing on page 989). Aluminium honeycomb doors provision for bogie steering (not on first prototype). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with wing main undercarriage on same side (see page 989). Light alloy frame and skin doors.
 - S52 Vwing main undercarriage hydraulically retracted (inwards with large angular rotation of bogie on screw hinge). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with body main undercarriage on same side (see drawing on page 989). Aluminium honeycomb doors provision for bogie steering (not on first prototype). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with wing main undercarriage on same side (see page 989). Light alloy frame and skin doors.
 - S53 Nose undercarriage hydraulically retracted (forward) with combined up/down lock selector. Twin steering cylinders. Low-profile tyre (19in 46 x 16 or 20in 50 x 20)
 - S54 Nose undercarriage main doors cover the opening undercarriage down or up (doors shown extended)
 - S55 Vwing main undercarriage hydraulically retracted (inwards with large angular rotation of bogie on screw hinge). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with body main undercarriage on same side (see drawing on page 989). Aluminium honeycomb doors provision for bogie steering (not on first prototype). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with wing main undercarriage on same side (see page 989). Light alloy frame and skin doors.
 - S56 Body main undercarriage hydraulically retracted (forwards) provision for bogie steering (not on first prototype). Low-profile tyre (50 x 20), anti-skid brake units in each wheel. Oleo-pneumatic suspension interlinked with wing main undercarriage on same side (see page 989). Light alloy frame and skin doors.
- Flying controls** (see also page 981)
- C1 Dual control wheels operate unboosted cable system (with artificial feel applied) to power (hydraulic) control packages at the surfaces. Push-pull varies elevator position; wheel rotation deploys aileron/spoiler system with programmed response according to aircraft speed and configuration. Control wheels carry trimmer switches for actuation (through electrical system) of adjustable tailplane
 - C2 Dual rudder pedals operate unboosted cable system (with artificial feel applied) to a power (hydraulic) control package on each rudder panel. Toe brake pedals
 - C3 Centre console carries: dual levers for actuation (through cable system) of adjustable tailplane mechanism; tailplane position and "in motion" indicators; flap selector lever; and speed brake (spoiler) selector lever
 - C4 Elevator cables run from the columns beneath upper deck floor to the apex of the fuselage to pulleys below fin to rear quadrant and feel unit (C5)
 - C5 Elevator control rear quadrant and feel unit
 - C6 Inner elevator power control package signalled from rear quadrant (C5) through pushrods
 - C7 Outer elevator power control package signalled by cable system from opposite side inboard elevator
 - C8 Tailplane angle change drive units containing two independent hydraulic drive systems (three sources of hydraulic power) separate electric controls to the main units and separate electrical
 - C9 Ball screw and nut (dual) drive from C8 to tailplane centre section i.e.
 - C10 Rudder feel and centring spring commanded through cable system from dual pedals on flightdeck. Signals transmitted through pushrods to C11. Trim screw input received through cable system from flightdeck
 - C11 Rudder power control package on each rudder panel
 - C12 Lateral control system spoiler speed brake mixer units, aileron programmer, centring and trim units located on aft face of wing centre-section rear bulkhead (see

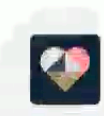
11:31



Search or type web address



asdf



Umbraco d...



LinkedIn



TimKadlec...



Feedbin



Yoga clothe...



NBA = Natio...



DAL In-Flig...

Articles for you


[Hide](#)

Both Maisie Williams and
Lena Headey Wanted Arya to
Finish Her List

 io9 - Gizmodo - 21 hours ago

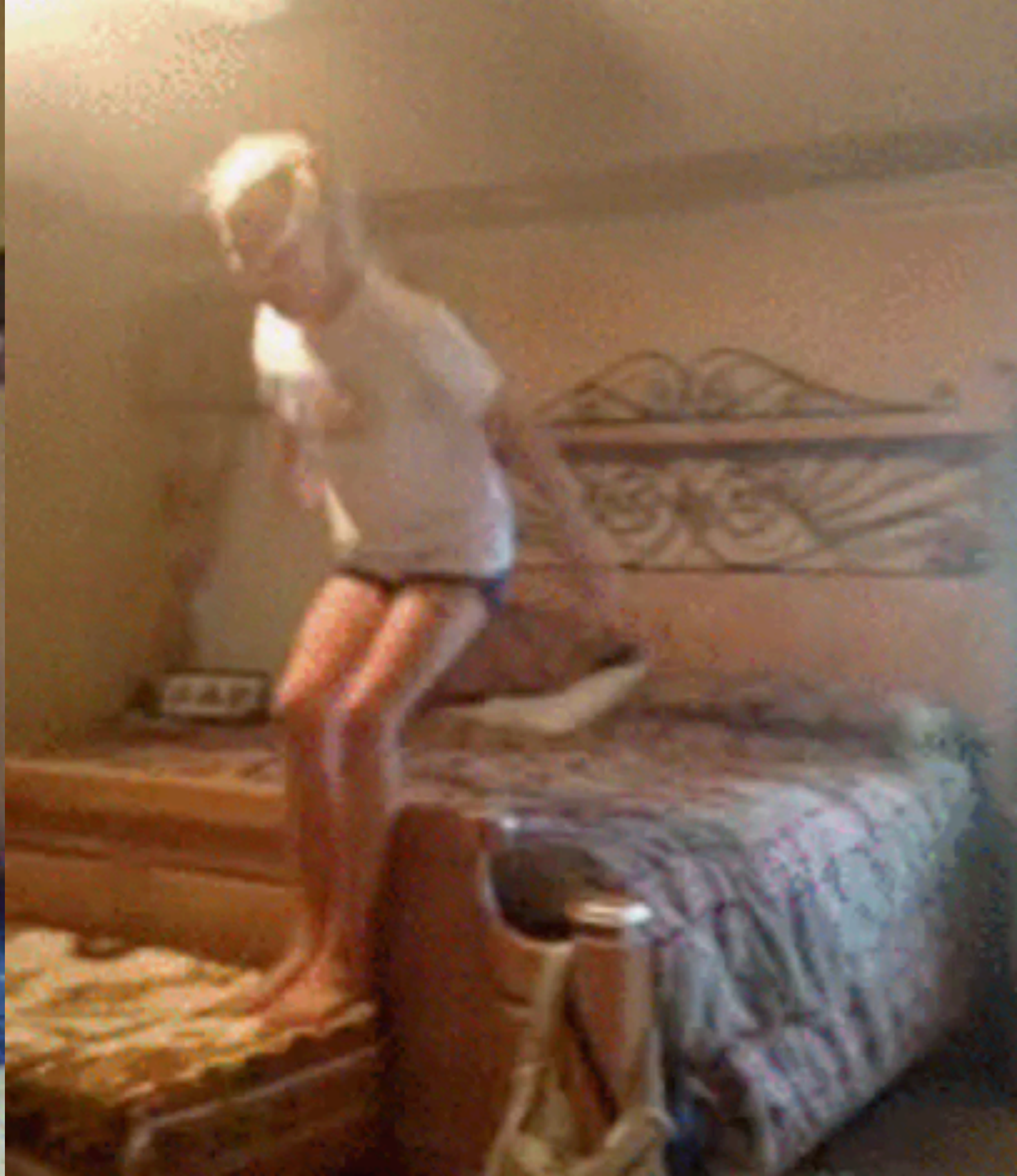


8 Questions Game of Thrones
Will Never Answer

 io9 - Gizmodo - Yesterday



ANTICIPATE
FAILURE



A dense, chaotic pile of various tools including saws, pliers, screwdrivers, and knives, with the text "BETTER EQUIPPED THAN EVER" overlaid in white. The tools are of various colors and sizes, creating a complex, textured background. The text is in a bold, white, sans-serif font, centered horizontally and vertically. The background is a dark, muted color, making the white text stand out. The tools are piled together in a way that suggests a large, well-stocked toolbox or a collection of tools for various tasks. The overall image conveys a sense of readiness and preparedness.

BETTER
EQUIPPED
THAN EVER

3.1MB

average site

1.8MB

median site

3.1MB

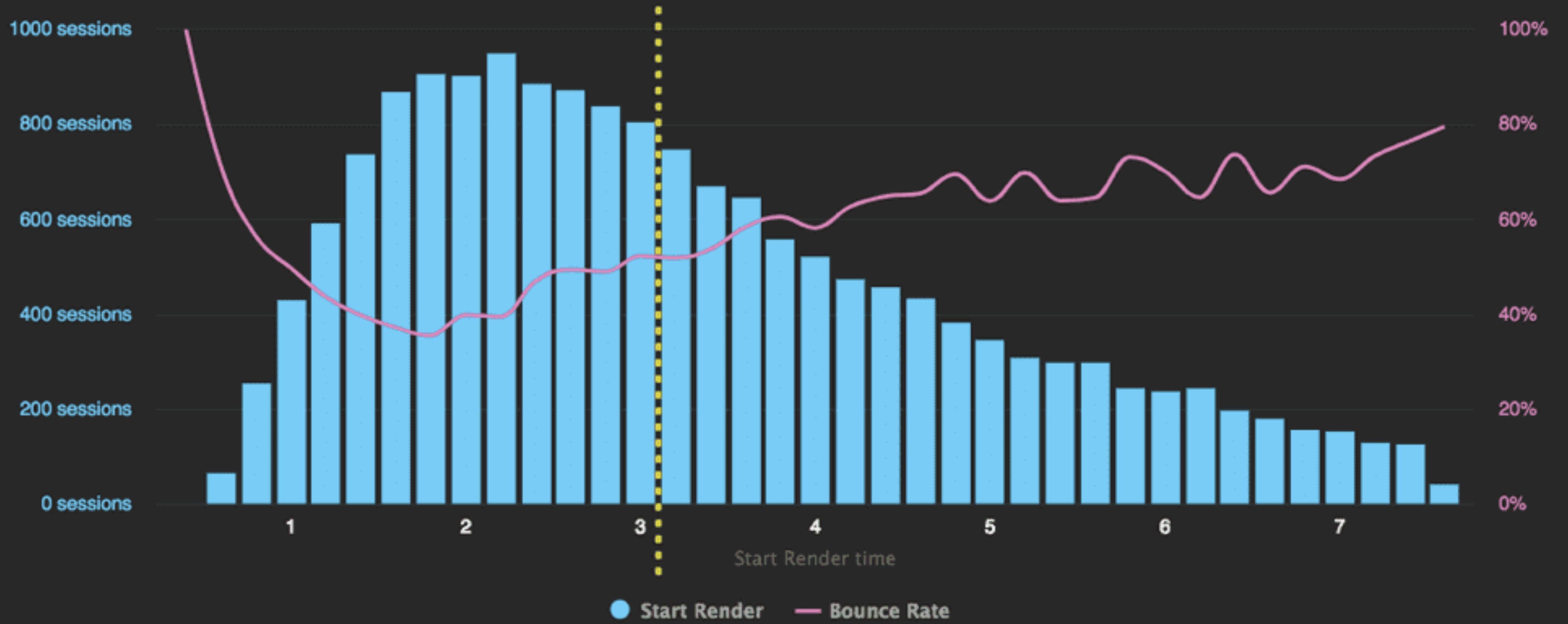
average site

1.8MB

median site

6.5mb

90% percentile



THE LONG-TAIL IS
WHERE THE REAL
WORLD HAPPENS



“SITUATIONAL
DISABILITIES”



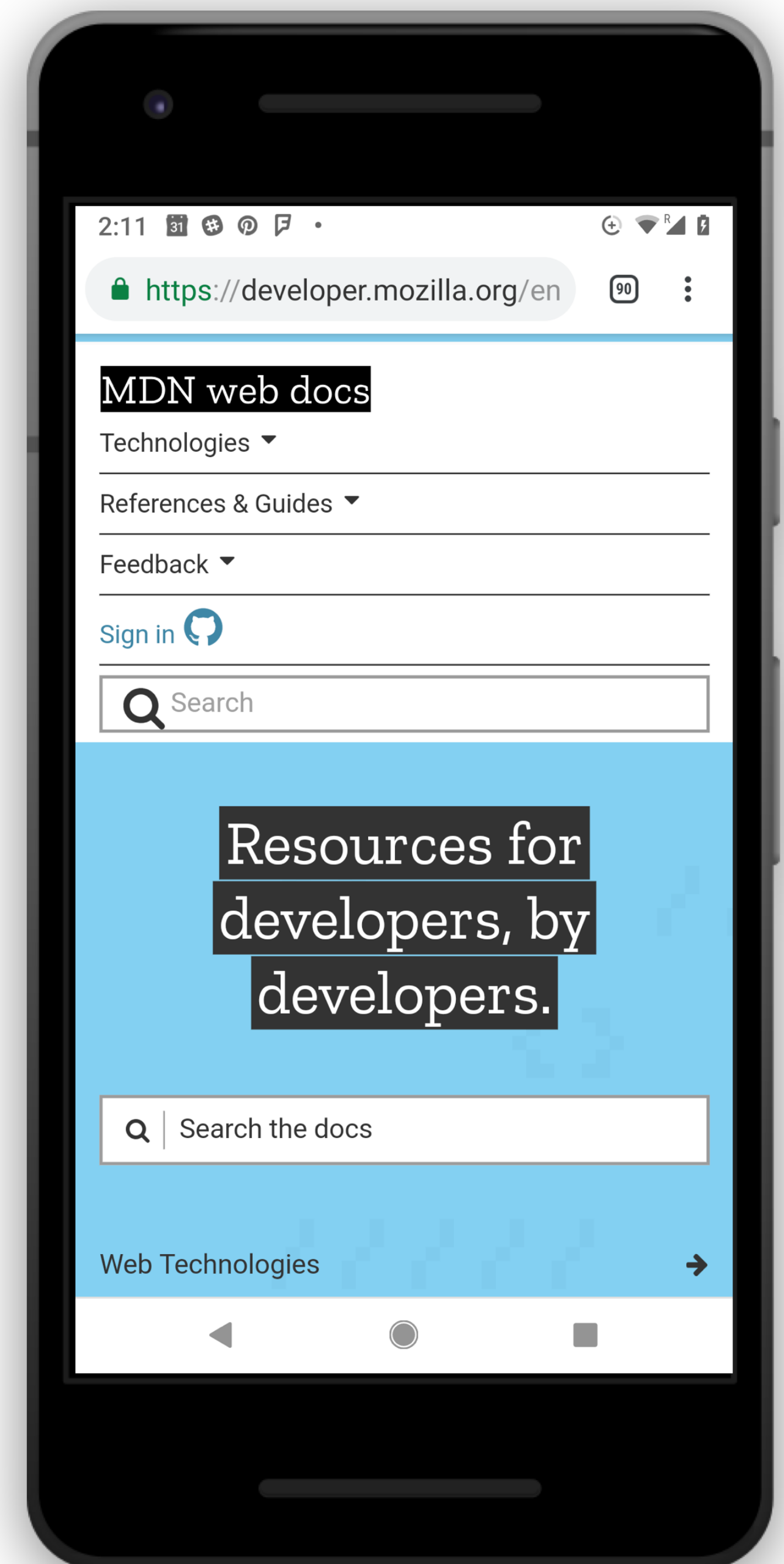
MDN web docs

moz://a

1366px twice as

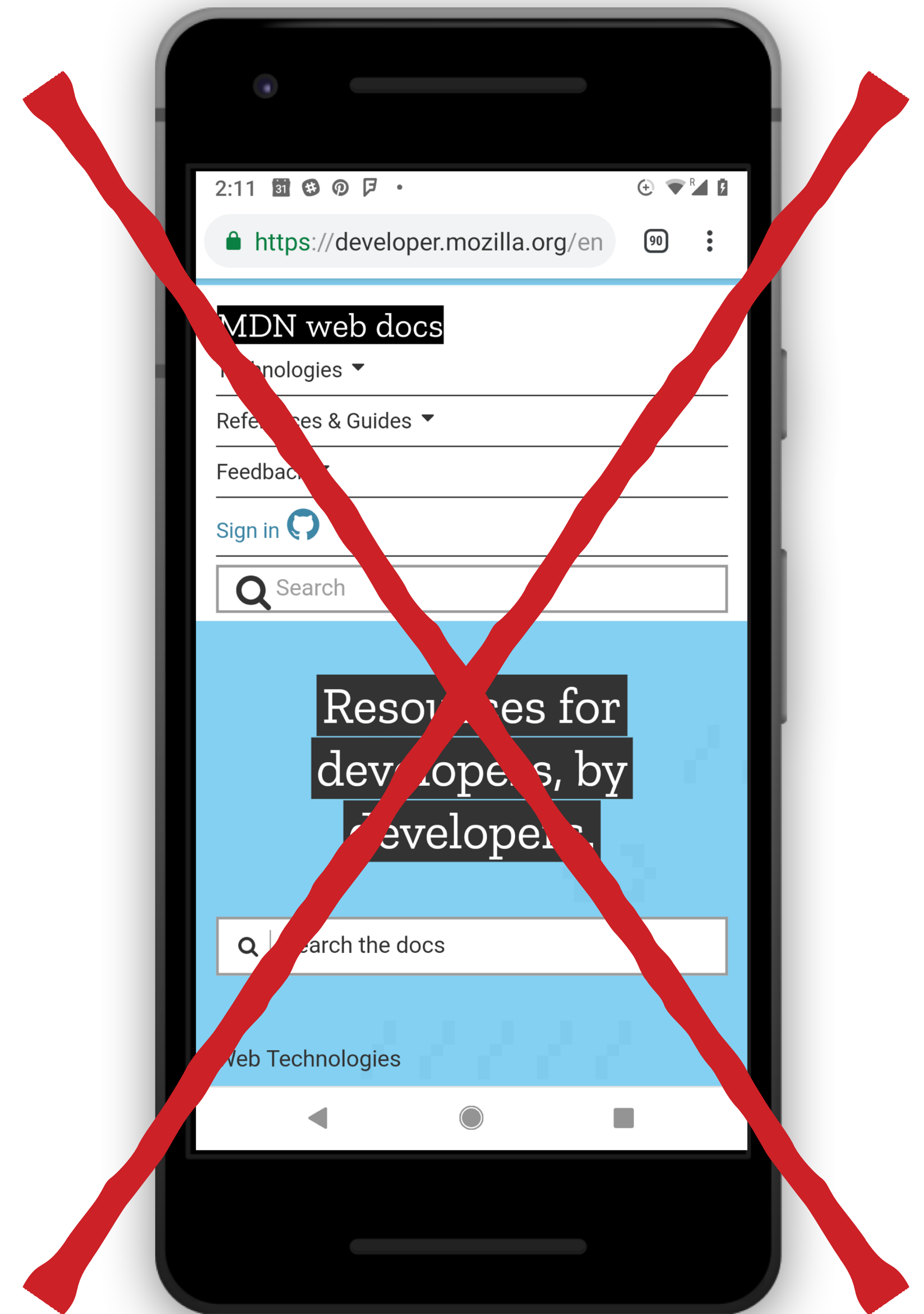
slow as 1920px

cpu bound





cpu bound





WEBPAGETEST

IIS WebS

HOME

TEST HISTORY

FORUMS

DOCUMENTATION

ABOUT

Test a website's performance



Advanced Testing

Simple Testing



Visual Comparison

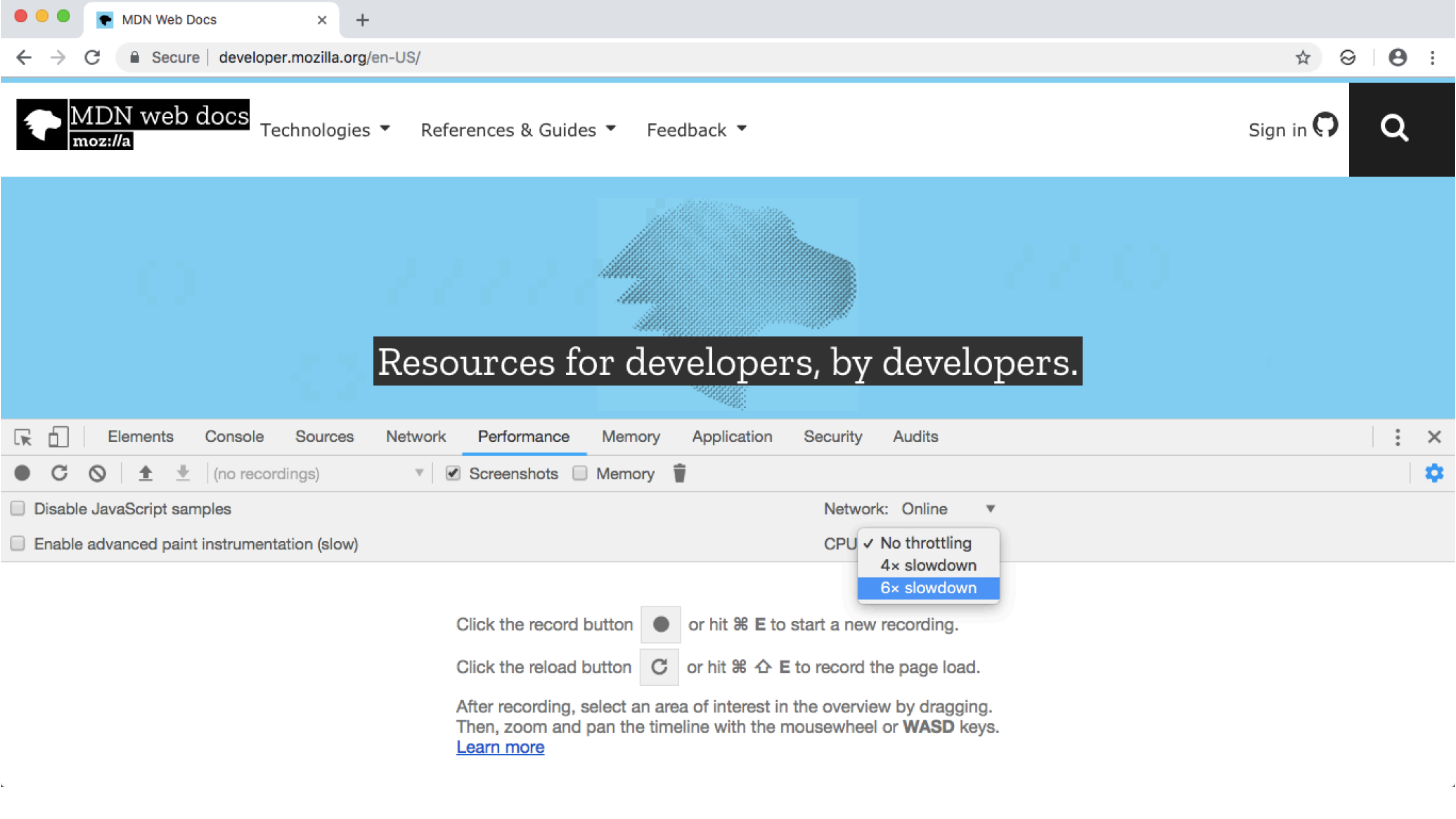


Traceroute

Enter a Website URL


Test Location

Dulles, VA USA (Desktop, Android, iOS)




Resources for developers, by developers.

Click the record button  or hit **⌘ E** to start a new recording.

Click the reload button  or hit **⌘ ⇧ E** to record the page load.

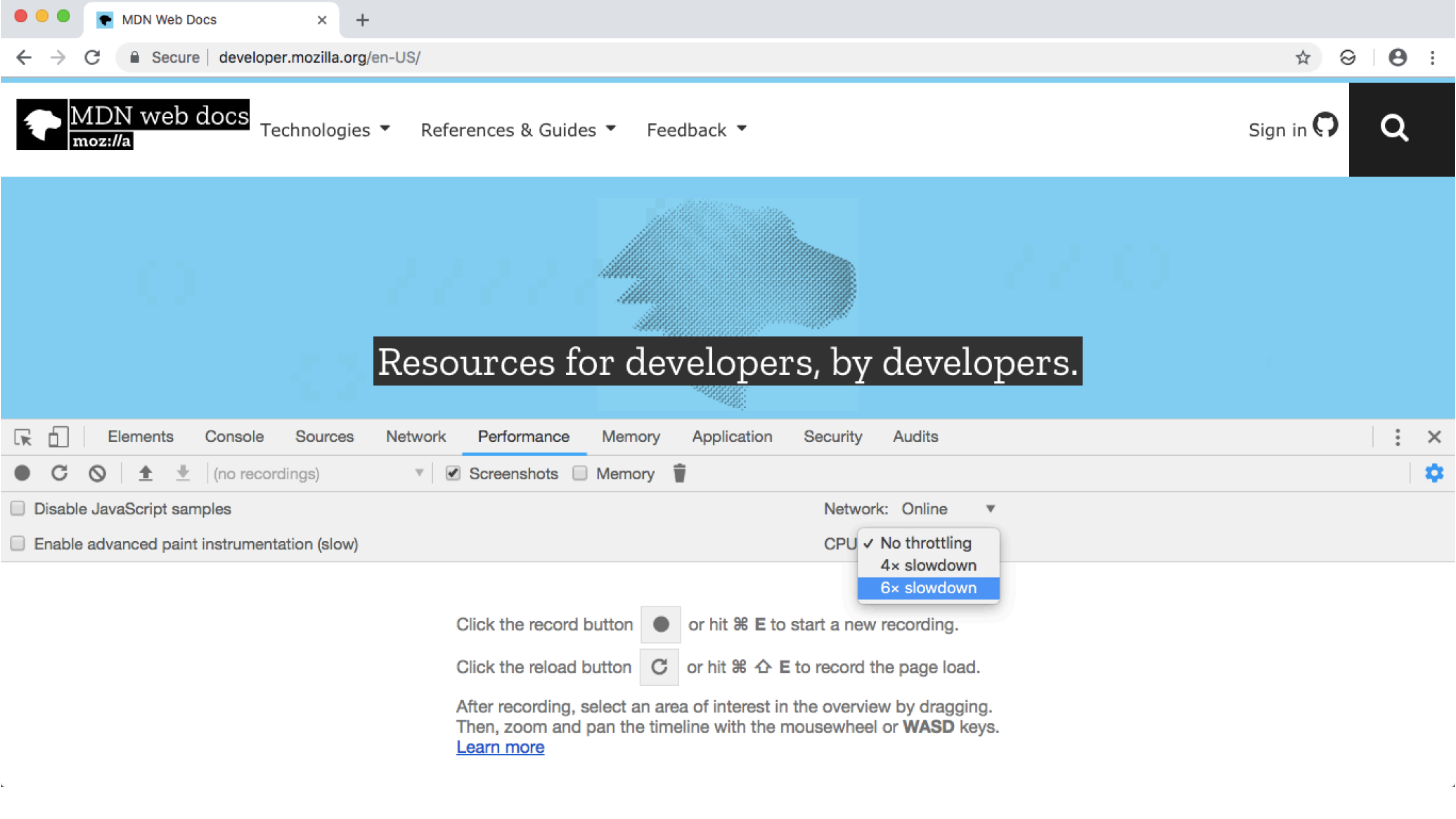
After recording, select an area of interest in the overview by dragging.
Then, zoom and pan the timeline with the mousewheel or **WASD** keys.
[Learn more](#)

Click the record button  or hit  **E** to start a new recording.


Click the reload button  or hit   **E** to record the page load.


After recording, select an area of interest in the overview by dragging.
Then, zoom and pan the timeline with the mousewheel or **WASD** keys.

[Learn more](#)



Resources for developers, by developers.

Click the record button  or hit **⌘ E** to start a new recording.

Click the reload button  or hit **⌘ ⇧ E** to record the page load.

After recording, select an area of interest in the overview by dragging.
Then, zoom and pan the timeline with the mousewheel or **WASD** keys.
[Learn more](#)

Zilla Slab

Zilla Slab Bold

Zilla Slab Italic

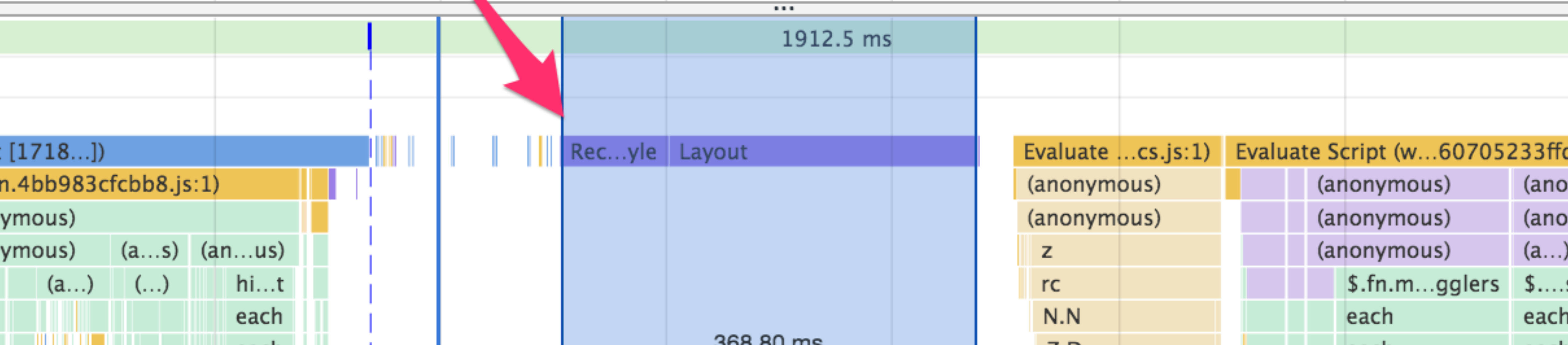
Open Sans

Open Sans Italic

Open Sans Semibold



....and lead to another recalc/layout combo



Open Sans Regular + Font Synthesis

The web is healthy when the financial cost of self-expression isn't a barrier.

Posted August 22, 2018 by Tara Vancil

The web is healthy when the financial cost of self-expression isn't a barrier.

Open Sans Regular, Italic, Bold

The web is healthy when the financial cost of self-expression isn't a barrier.

Posted August 22, 2018 by Tara Vancil

The web is healthy when the financial cost of self-expression isn't a barrier.

Zilla Regular + Font Synthesis

Resources for developers, by developers

read more at hacks.mozilla.org

Learn the best of web development

Zilla Regular, Italic, Bold

Resources for developers, by developers

read more at hacks.mozilla.org

Learn the best of web development

Zilla Slab

Zilla Slab Bold

~~Zilla Slab Italic~~

Open Sans

~~Open Sans Italic~~

Open Sans Semibold

Font style matcher

Secure | meowni.ca/font-style-matcher/

Font style matcher

If you're using a web font, you're bound to see a flash of unstyled text (or FOUC), between the initial render of your websafe font and the webfont that you've chosen. This usually results in a jarring shift in layout, due to sizing discrepancies between the two fonts. To minimize this discrepancy, you can try to match the fallback font and the intended webfont's x-heights and widths [1]. This tool helps you do *exactly* that.

Fallback font

Verdana

Font size: 15px

Line height: 1.7

Font weight: 300

Letter spacing: -0.05px

Word spacing: 0px

Copy CSS to clipboard

Web font

Open Sans

☒ Download from Google Fonts, or:

Font size: 16px

Line height: 1

Font weight: 300

Letter spacing: 0px

Word spacing: 0px

Copy CSS to clipboard

<https://bit.ly/2xxyqlj>

Font style matcher

Secure | meowni.ca/font-style-matcher/

☆ | 🔄 | 👤 | ⋮

Word spacing: 0px

Copy CSS to clipboard

The fox jumped over the lazy dog, the scoundrel.

Word spacing: 0px

Copy CSS to clipboard

The fox jumped over the lazy dog, the scoundrel.

Overlapped

In the default example, Merriweather is taller and wider than Georgia, so if you bump Georgia's **font size** up to 18px, and its **letter spacing** to 0.1px you'll get a pretty close match!

☒ Use different colours for each font

☐ See layout shift due to FOUC

The fox jumped over the lazy dog, the scoundrel.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

MADE WITH ✨ BY MONICA. INSPIRED BY HELEN'S BLOG POST. FIND THIS ON GITHUB

JavaScript

Web technology for
developers >

JavaScript

Related Topics

JavaScript

Tutorials:

- ▶ Complete beginners
- ▶ JavaScript Guide
- ▶ Intermediate
- ▶ Advanced

References:

- ▶ Built-in objects
- ▶ Expressions & operators
- ▶ Statements & declarations
- ▶ Functions
- ▶ Classes
- ▶ Errors
- ▶ Misc
- ▶ New in JavaScript

Documentation:

- ▶ Useful lists
- ▶ Contribute

JavaScript (JS) is a lightweight interpreted or JIT-compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, [many non-browser environments](#) also use it, such as [Node.js](#), [Apache CouchDB](#) and [Adobe Acrobat](#). JavaScript is a prototype-based, multi-paradigm, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles. Read more [about JavaScript](#).

This section is dedicated to the JavaScript language itself, and not the parts that are specific to Web pages or other host environments. For information about APIs specific to Web pages, please see [Web APIs](#) and [DOM](#).

The standard for JavaScript is [ECMAScript](#). As of 2012, all [modern browsers](#) fully support ECMAScript 5.1. Older browsers support at least ECMAScript 3. On June 17, 2015, [ECMA International](#) published the sixth major version of ECMAScript, which is officially called ECMAScript 2015, and was initially referred to as ECMAScript 6 or ES6. Since then, ECMAScript standards are on yearly release cycles. This documentation refers to the latest draft version, which is currently [ECMAScript 2019](#).

Do not confuse JavaScript with the [Java programming language](#). Both "Java" and "JavaScript" are trademarks or registered trademarks of Oracle in the U.S. and other countries. However, the two programming languages have very different syntax, semantics, and uses.

JavaScript (JS) is a lightweight interpreted or JIT-compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, [many non-browser environments](#) also use it, such as [Node.js](#), [Apache CouchDB](#) and [Adobe Acrobat](#). JavaScript is a prototype-based, multi-paradigm, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles. Read more [about JavaScript](#).

This section is dedicated to the JavaScript language itself, and not the parts that are specific to Web pages or other host environments. For information about APIs specific to Web pages, please see [Web APIs](#) and [DOM](#).

The standard for JavaScript is [ECMAScript](#). As of 2012, all [modern browsers](#) fully support ECMAScript 5.1. Older browsers support at least ECMAScript 3. On June 17, 2015, [ECMA International](#) published the sixth major version of ECMAScript, which is officially called ECMAScript 2015, and was initially referred to as ECMAScript 6 or ES6. Since then, ECMAScript standards are on yearly release cycles. This documentation refers to the latest draft version, which is currently [ECMAScript 2019](#).

Do not confuse JavaScript with the [Java programming language](#). Both "Java" and "JavaScript" are trademarks or registered trademarks of Oracle in the U.S. and other countries. However, the two programming languages have very different syntax, semantics, and uses.

Zilla Slab

Zilla Slab Bold

~~Zilla Slab Italic~~

~~Open Sans~~

~~Open Sans Italic~~

~~Open Sans Semibold~~

Verdana Bold

Zilla Slab - 67kb

Zilla Slab Bold - 67kb

pyftsubset

Basic Latin

U+0020–007F

Latin-1 Supplement

U+00A0–00FF

Latin Extended-A

U+0100–017F

Latin Extended-B

U+0180–024F

General Punctuation

U+2000–206F

Currency Symbols

U+20A0–20CF


```
pyftsubset  
  ZillaSlab-Bold.ttf  
  -unicodes-file=latin-characters  
  --flavor=woff2
```




Search or jump to...



[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)



 [filamentgroup](#) / [glyphhanger](#)

 Watch ▾


17

★ Star

535

 Fork

17

 Code

 Issues 21

 Pull requests 3

 Insights

Your web font utility belt. It shows what unicode-ranges are used on a web site (optionally for a font-family or for each font-family). It can also subset web fonts. It makes julienne fries.

[webfonts](#)

[web-fonts](#)

[glyphs](#)

[unicode](#)


[spider](#)

[subset](#)

[subsetting](#)

[font](#)

 110 commits

 1 branch

 13 releases

 4 contributors

 MIT

Branch: master ▾

[New pull request](#)

[Create new file](#)

[Upload files](#)










[Find file](#)

[Clone or download ▾](#)



[zachleat](#) Merge pull request [#44](#) from patrickkettner/master ...

Latest commit 3027aa1 on May 2

 docs	Removes verbose mode and replaces with DEBUG	9 months ago
 src	add --onlyVisible flag	7 months ago
 test	add --onlyVisible flag	7 months ago
 .gitignore	Initial commit.	2 years ago
 .travis.yml	Trying to get travis working.	9 months ago
 LICENSE	Initial commit	2 years ago
 README.md	add --onlyVisible flag	7 months ago
 cmd.js	add --onlyVisible flag	7 months ago
 package.json	Bump to 3.0.3	8 months ago

Zilla Slab - ~~67kb~~ 33kb

Zilla Slab Bold - ~~67kb~~ 33kb

289kb

less weight

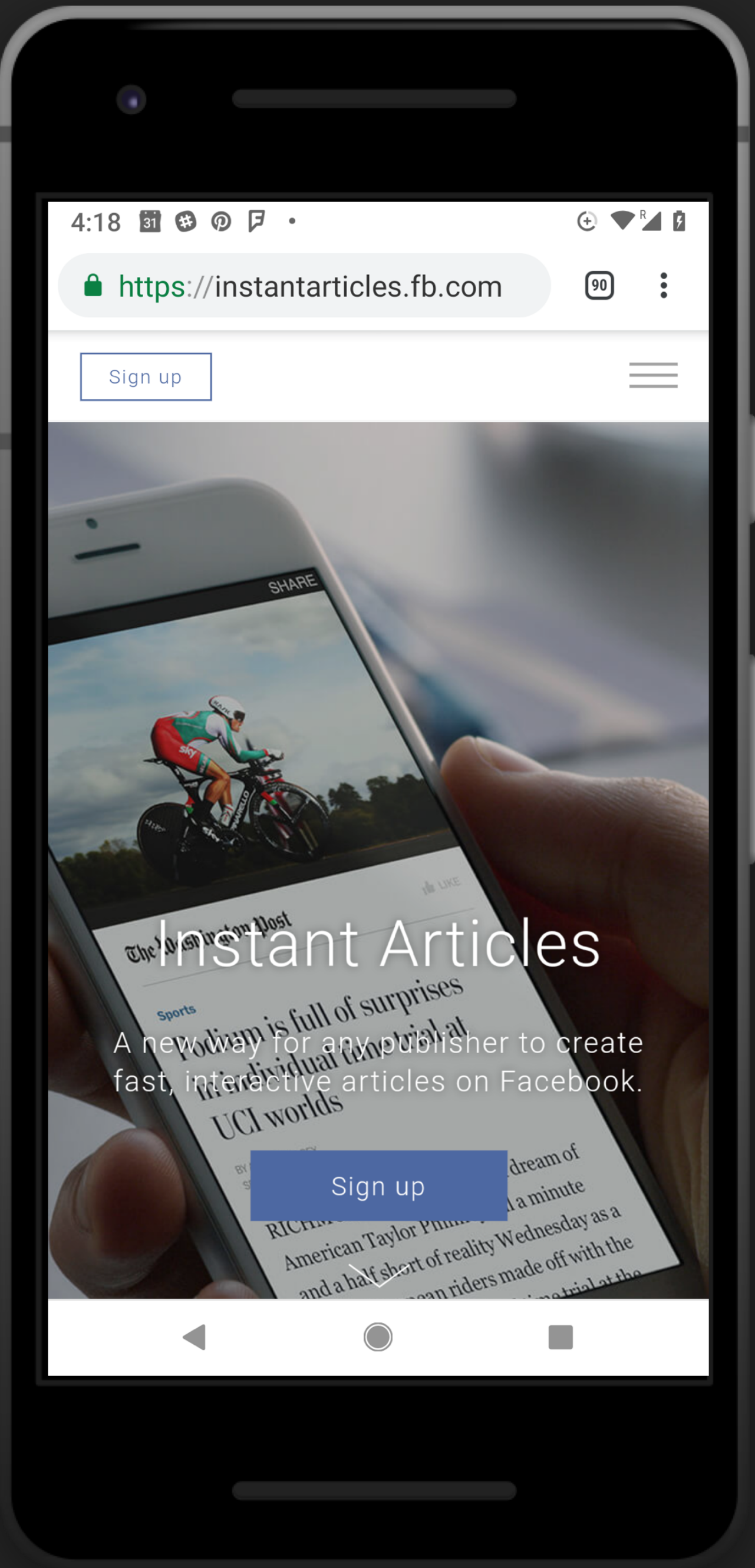
12%

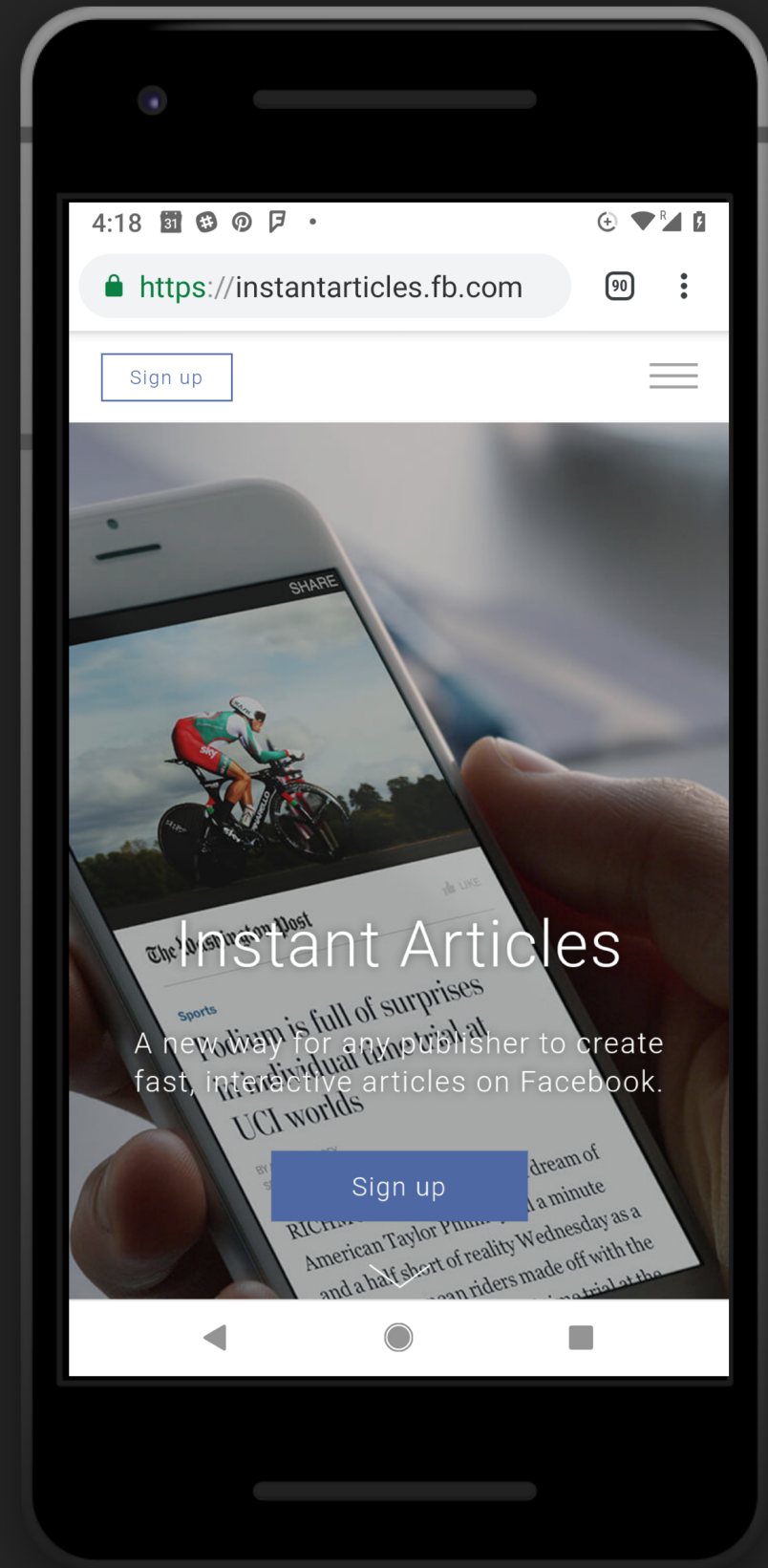
less layout

1s

faster
TTE

DATA USED IS A
USER-CENTRIC
METRIC

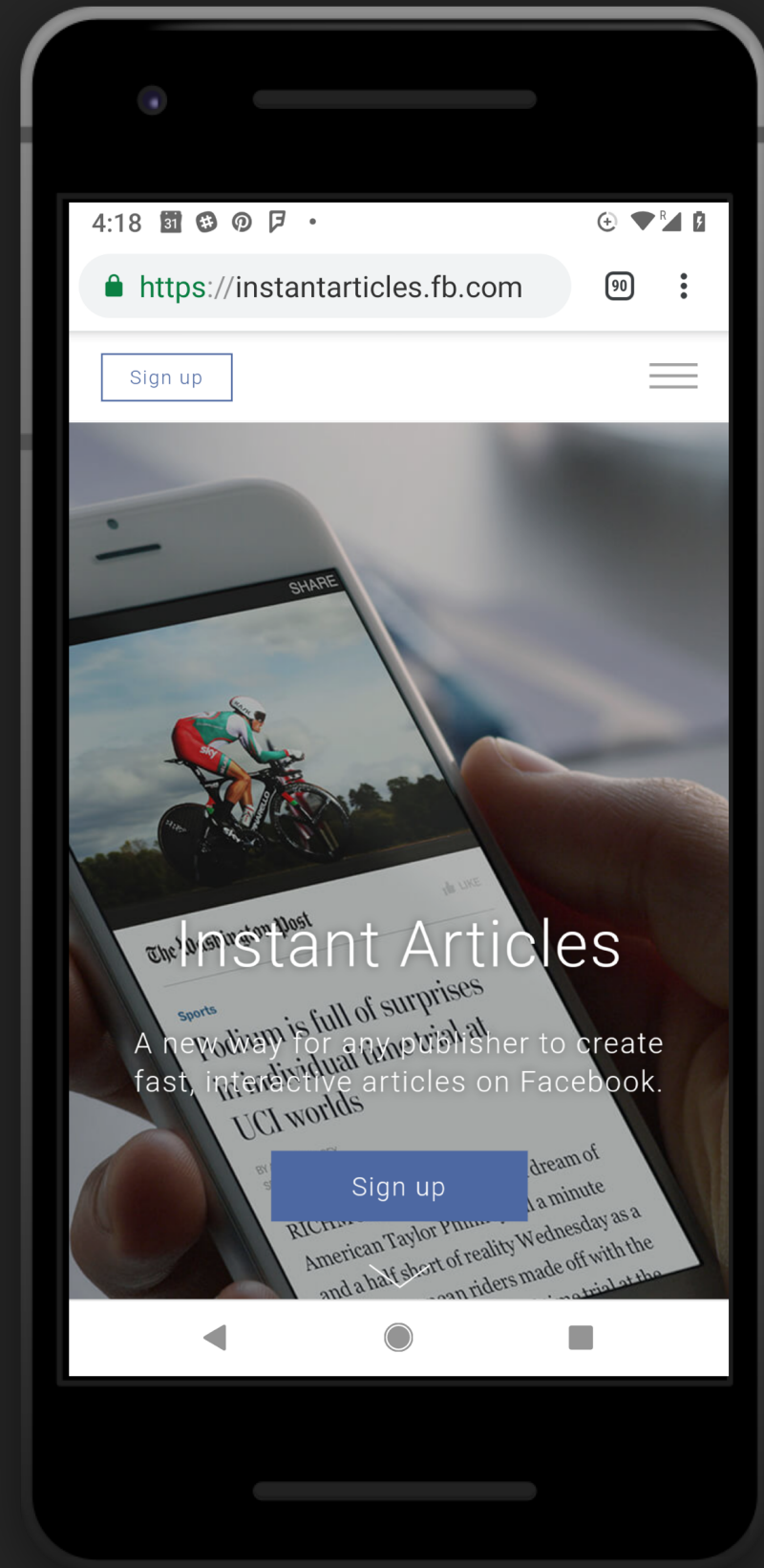




Instant Articles

A new way for any publisher to create fast, interactive articles on Facebook.

Country	Cost (in USD, PPP)
United States	\$1.44
This exceeds the \$1.25 per day poverty level. Approximately 5,420,994 people in United States live below this level.	
Switzerland	\$1.35
This exceeds the \$1.25 per day poverty level.	
Ireland	\$1.29
This exceeds the \$1.25 per day poverty level.	
Canada	\$0.90
Vanuatu	\$0.89
Germany	\$0.78
Netherlands	\$0.65
United Kingdom	\$0.53



Country

% of GNI per capita (daily)

Vanuatu

10.3%

Mauritania

9.67%

Madagascar

8.11%

Niger

5.77%

Tanzania

3.21%

Angola

2.75%

Botswana

2.06%

ome and Principe

1.92%

Afghanistan

1.58%

Nigeria

1.54%

Nemibia

33%

disposable income





NPR 

@NPR

Follow



We have a text-only version of our website for anyone who needs to stay up-to-date on Hurricane Florence news and keep their battery and data usage to a minimum:

[n.pr/2N1Cd4j](https://npr/2N1Cd4j)

7:40 AM - 14 Sep 2018

Text-Only NPR.org (go to [full version](#))

Home

May 3, 2019

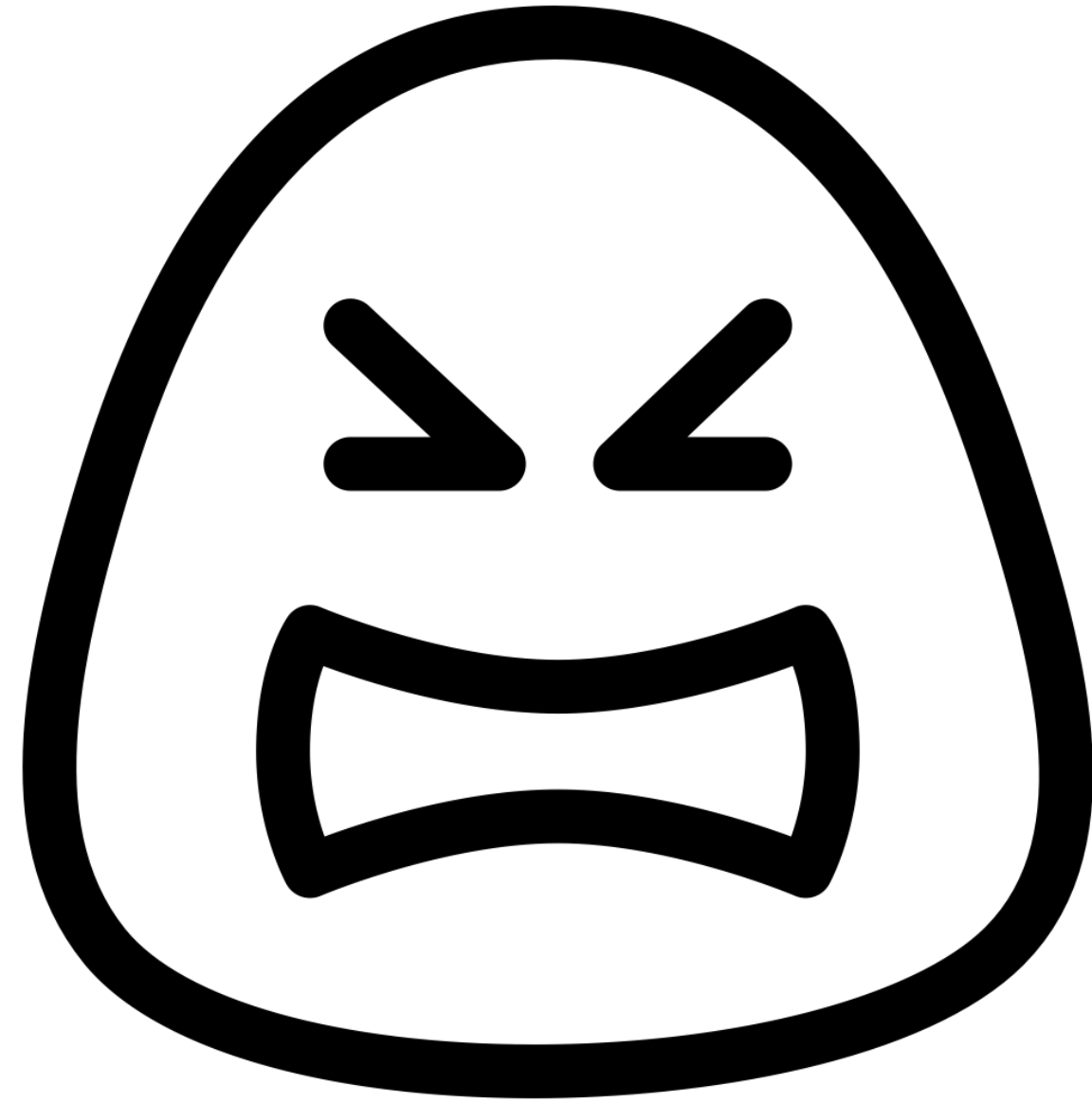
Top News Stories

- [Teachers Begin To See Unfair Student Loans Disappear](#)
- [Solid Job Gains Expected, Latest Sign The U.S. Economy Remains Strong](#)
- [Employees Start To Feel The Squeeze Of High-Deductible Health Plans](#)
- [Peter Mayhew, Portrayed Chewbacca The Wookiee In 'Star Wars' Movies, Dies At 74](#)
- [Baltimore Mayor Catherine Pugh Resigns In Aftermath Of Children's Book Scandal](#)
- [Army Soldier Falls Into Hawaii's Kilauea Volcano After Straining For Better View](#)
- [1 Child Dead, 3 People Missing After Migrant Raft Overturns In Rio Grande](#)
- [At This Tony-Nominated 'Prom,' The Theme Is Acceptance](#)
- ['We Were Lucky': Kids Of Holocaust Survivors Learned Their Parents' Life Philosophy](#)
- [Your Guide To Free Comic Book Day 2019: Best Bets For Every Reader](#)

Topics

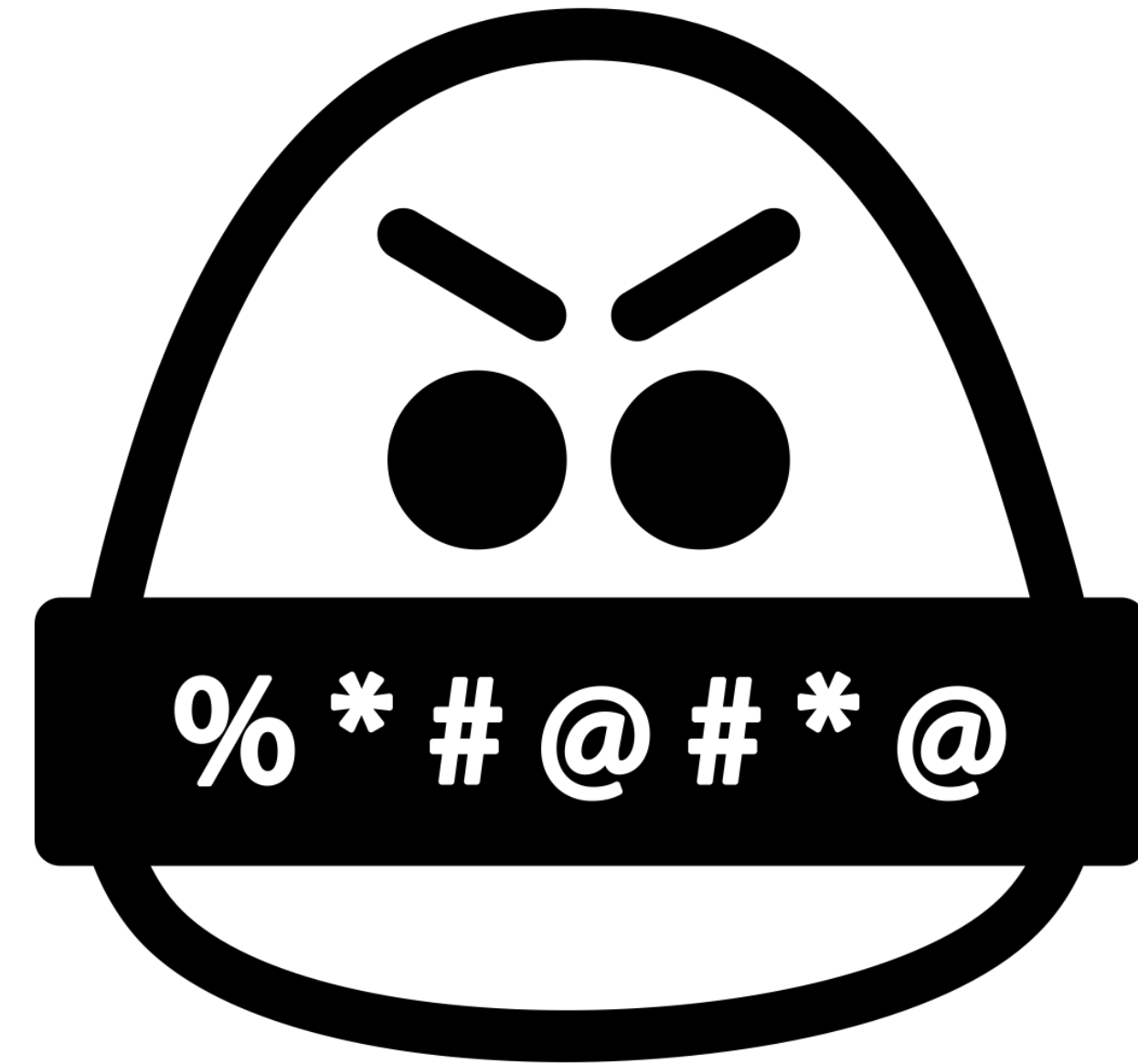
- [News](#)
- [Arts & Life](#)
- [Music](#)

- [Contact Us](#)
- [Terms of Use](#)
- [Permissions](#)
- [Privacy Policy](#)



11%

yell



23%

swear

A close-up photograph of a smartphone lying on a dark wooden surface. The screen is severely damaged, with a dense network of cracks and spiderweb-like fractures across the entire surface. Through the broken glass, various app icons are visible, including a weather app showing '80° Party', a 'Globe' icon, a 'TouchDown' app, a 'Camera' app, a 'Browser' app, a 'Play Store' app, a 'Sound Recorder' app, and a 'QR Droid' app. The phone's black bezel is visible around the edges of the screen.

40%
throw their
phones



Mobile Phone Throwing World Championships

[Home](#)[History](#)[Rules](#)[Contact us](#)[Photo Gallery](#)[News](#)[Registration](#)[Results](#)

Mobile Phone Throwing World Championships

The traditional fun sport of Mobilephone Throwing takes a break at the moment.

We are making plans with local actors for the future.

Mobile Phone Throwing is light and modern Finnish sport that suits for people of all ages. It combines recycling philosophy and fun spirit in active sport. A part of the philosophy is also a spiritual freedom from being available all the time.

Why do people throw it?

Finland is known as the home country of the mobile phones and Finns have always been very fashion-conscious about the phones.



[Suomeksi](#)

golla
FOR GENERATION MOBILE







concentrate
50%
more

The
Guardian

Core content

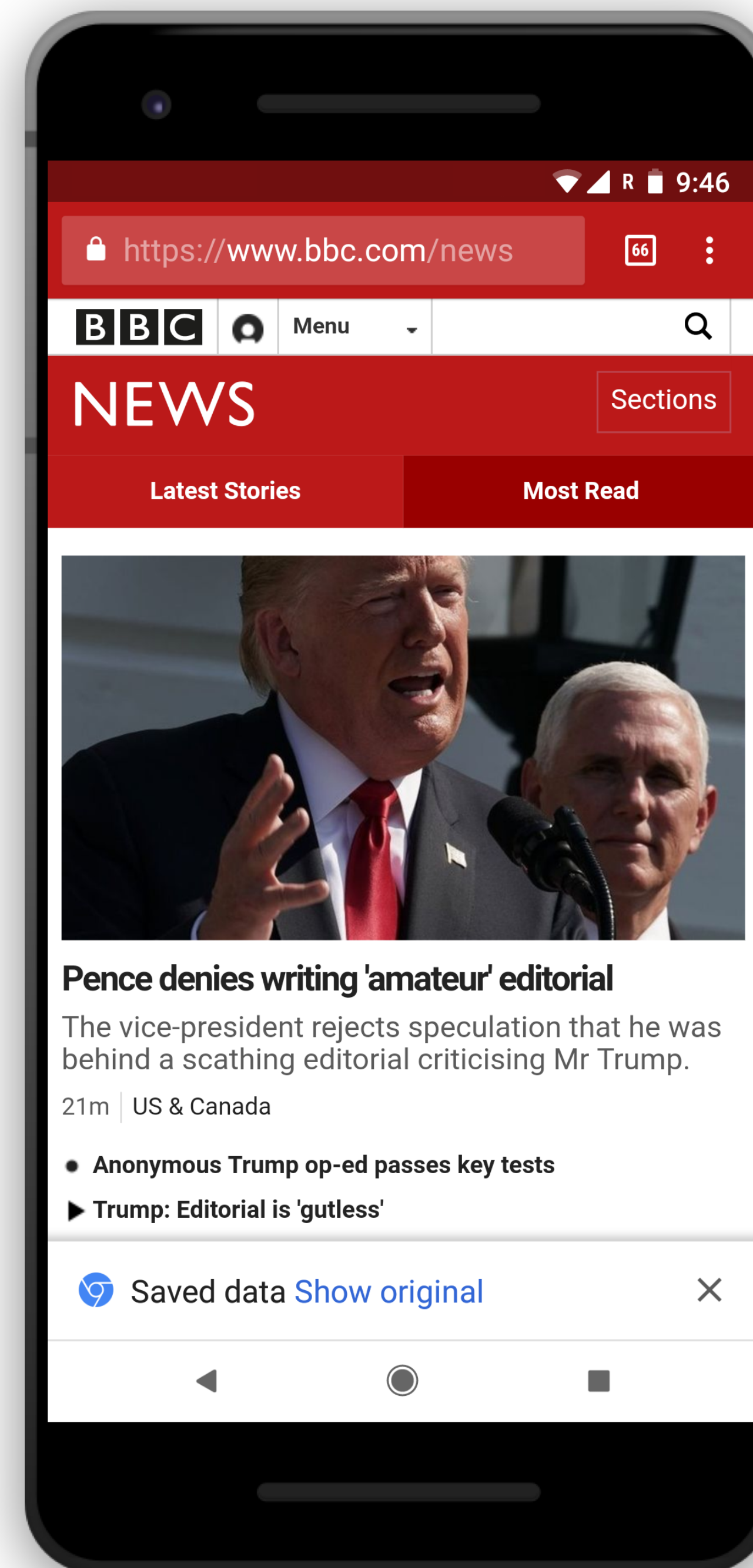
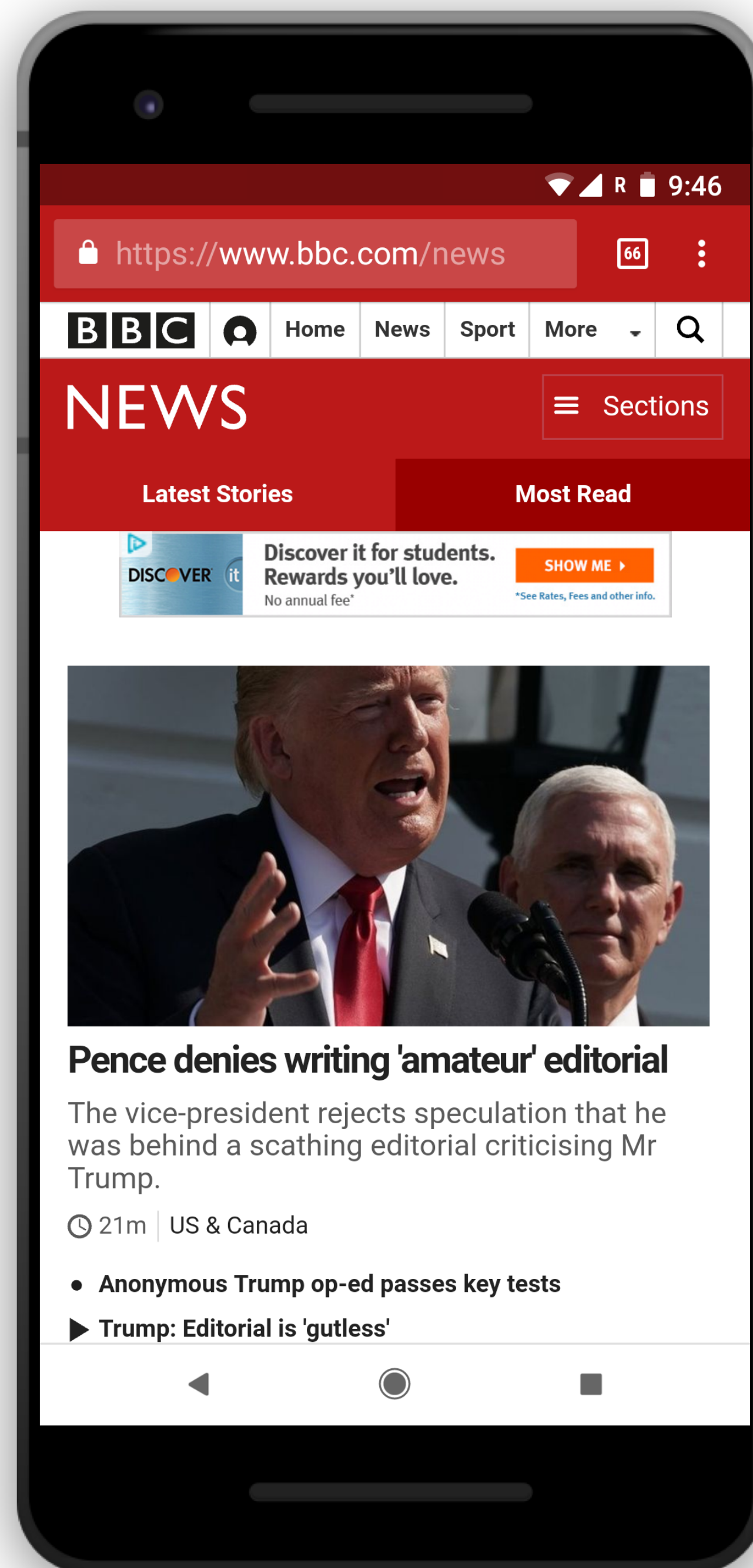
Essential HTML and CSS, usable non-JS experience

Enhancements

JavaScript, enhanced CSS, fonts, images, widgets

Leftovers

Analytics, advertising, third-party content



13 MILLION
REQUESTS FOR JAVASCRIPT
WILL TIMEOUT





21 NEW ARTICLES ▾



Chrome for Android may start disabling JavaScript on 2G connections



Corbin Davenport

📅 Aug 23, 2018



f 73



422

Total Shares 495



APPLICATIONS

CHROME

GOOGLE

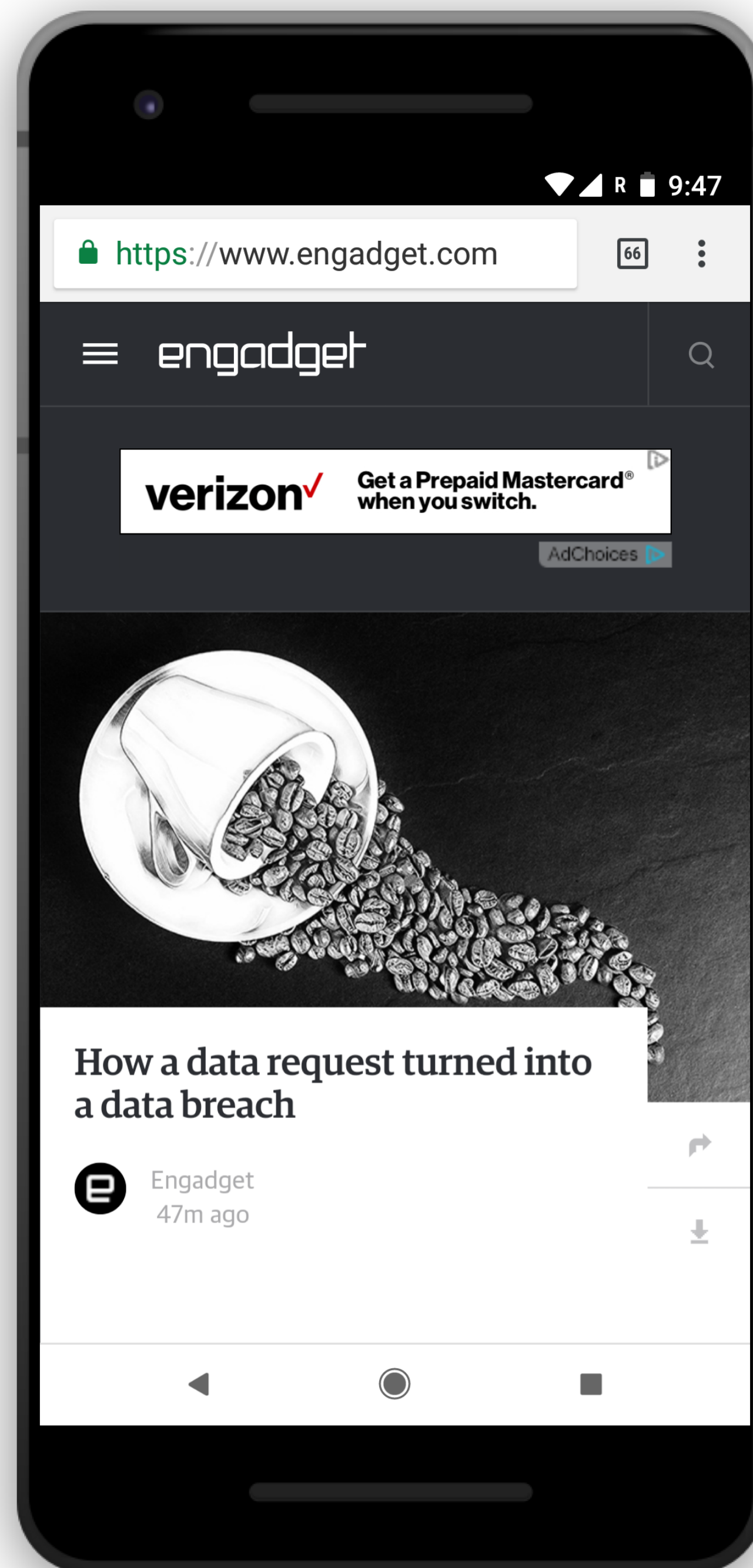


NEWS



URL	NOSCRIPT Weight (KB)	Original Weight (KB)	Change in Weight
https://www.wayfair.com/	164	3277	-95.0%
https://www.aliexpress.com/	72	2150	-96.6%
https://www.linkedin.com/	151	1536	-90.2%
https://www.reddit.com/	295	1126	-73.8%
https://www.bbc.com/news	354	467	-24.2%
https://www.theatlantic.com/	11673	2970	+293.0%
https://techcrunch.com/	548	2867	-80.9%
https://www.theverge.com/	68198	3174	+2048.4%
https://www.cnn.com/	418	7784	-94.6%
https://www.nytimes.com/	379	16650	-97.7%


```
<div data-cid="site/dynamic-image.jpg">  
  <noscript>  
      
  </noscript>  
</div>
```

THE LESS THE
CLIENT HAS TO DO,
THE BETTER



Intervention: Rewrite slow pages for Lite Mode (Data Saver) users

Performance



On web pages that are expected to load slowly, Chrome may modify loading behavior to provide a faster page load to Lite Mode (Data Saver) users. This behavior modification can take many forms including but not limited to: blocking specific resources, loading partial resources, loading a previously saved version of the page, using Google servers to rewrite pages, etc.

Comments

Existing Lite mode user optimizations:

<https://www.chromestatus.com/feature/6072546726248448>

<https://www.chromestatus.com/feature/4775088607985664>

<https://www.chromestatus.com/feature/4510564810227712>

<https://www.chromestatus.com/feature/5076871637106688>

Documentation

<https://developers.google.com/web/updates/2018/09/reportingapi>

Specification

[Established standard](#)

INTERVENTION



Save-Data: On


```
let saveData = false;
```

```
if (request.headers['save-data'] == 'on') {  
    saveData = true;  
}
```

```
// OR
```

```
if ("connection" in navigator) {  
    if (navigator.connection.saveData === true) {  
        }  
}
```


20%

of ~6 million daily users
enable Save-Data

Q

More ▾

'Five hurt' in Syracuse

⚙️ **No, take me to settings**



[Home](#)
[Video](#)
[World](#)
[UK](#)
[Business](#)
[Tech](#)
[Science](#)
[Stories](#)
[Entertainment & Arts](#)
[Health](#)
[World News TV](#)
[In Pictures](#)
[Reality Check](#)
[Newsbeat](#)
[More ▾](#)

'Five hurt' in Syracuse


```
this.addEventListener('fetch', event => {
  if(navigator.connection.saveData === true){
    if (/\.jpg$|\.gif$|\.png$/ .test(event.request.url)) {
      //return a highly compressed or smaller image
      event.respondWith(
        fetch(saveDataUrl, {
          mode: 'no-cors'
        })
      );
    }
    if (event.request.url.includes('fonts.googleapis.com')) {
      // return nothing and use fallback fonts instead
      event.respondWith(
        new Response('', {
          status: 408, statusText: 'Ignore fonts to save data.'
        })
      );
    }
  }
});
```




Katie Hempenius

@katiehempenius

Following



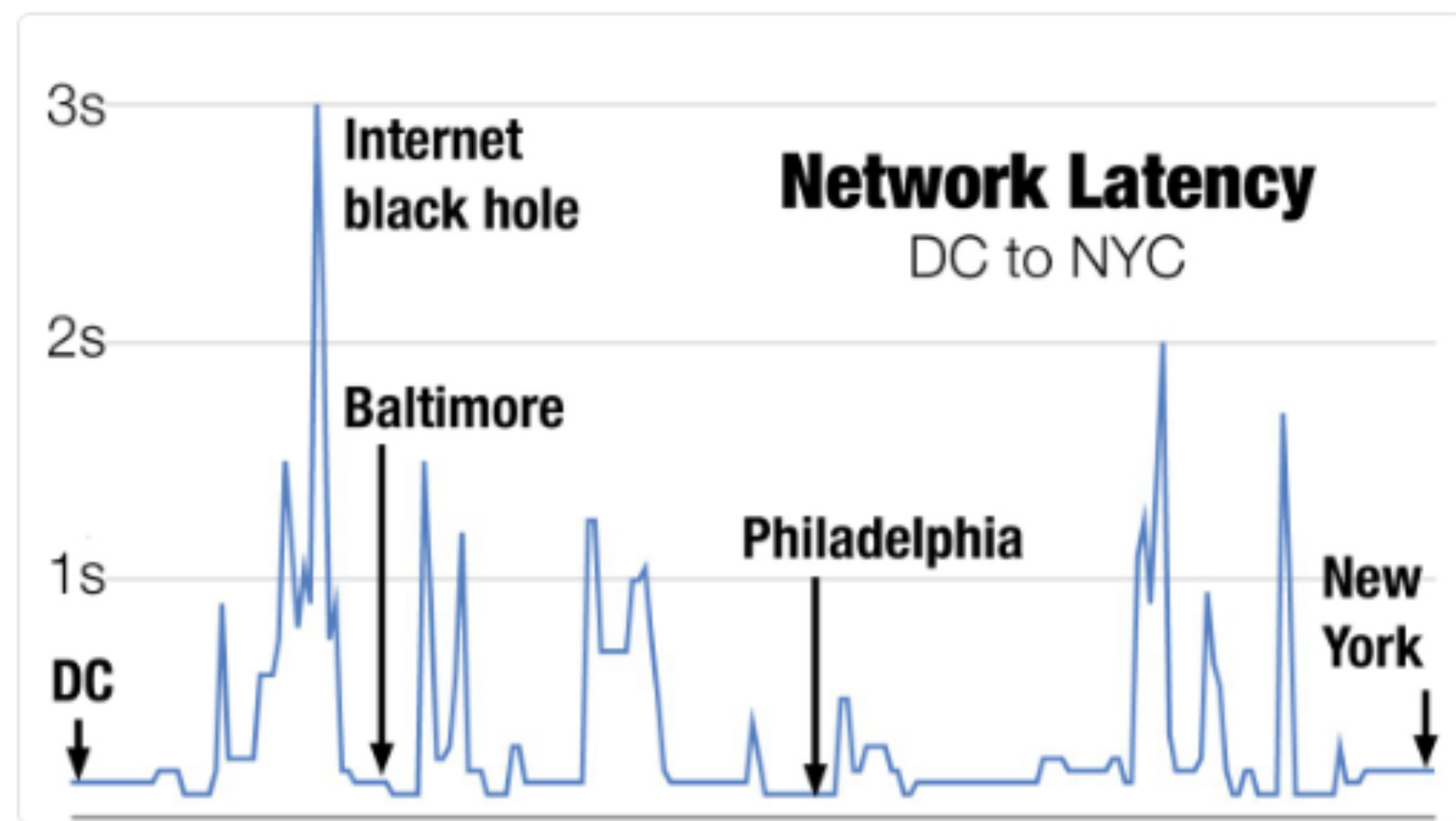
I measured network latency as I traveled between DC & NYC by train:

Max: 3 seconds (!!!!!)

Median: 150ms

Min: 100ms

It's amazing how inconsistent cell networks can be, even in one of the most densely populated areas of the US.



10:00 PM - 13 Sep 2018

Internet speed test



2.83

Mbps download

0.71

Mbps upload

Latency: 83 ms

Server: Chicago, IL

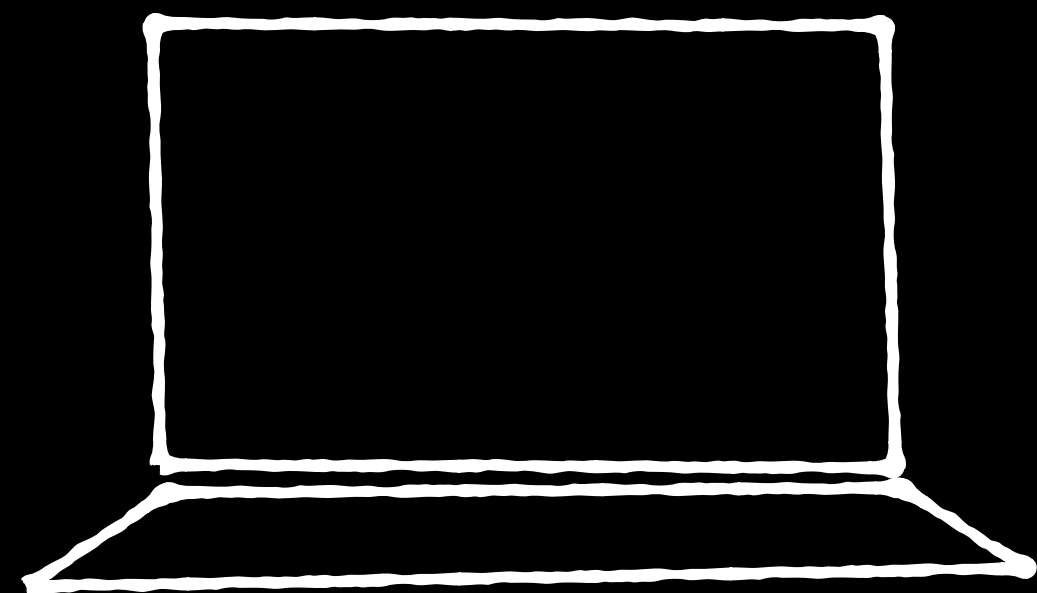
Your Internet speed is very slow

0.26 Mbps!

(South East London)



Memory cache



Net stack

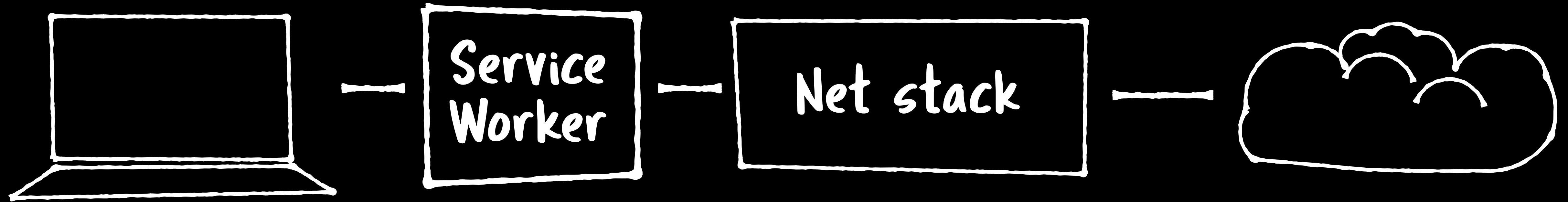


Memory cache



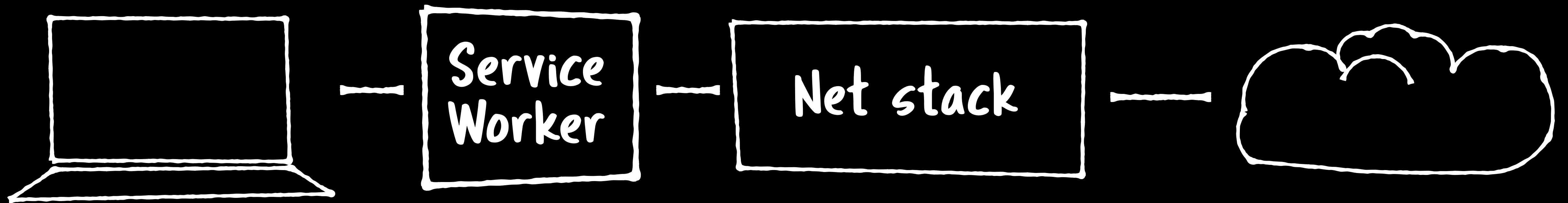
Disk cache





Memory cache

Disk cache



A dense, chaotic pile of various tools including saws, pliers, screwdrivers, and knives, with the text "BETTER EQUIPPED THAN EVER" overlaid in white. The tools are of various colors and sizes, creating a complex, textured background. The text is in a bold, white, sans-serif font, centered horizontally and vertically. The background is a dark, muted color, making the white text stand out. The tools are piled together in a way that suggests a large, well-stocked toolbox or a collection of tools for various tasks. The overall image conveys a sense of readiness and preparedness.

BETTER
EQUIPPED
THAN EVER

BUILD IN
LAYERS

BUILD IN
LAYERS



THE CHOICE
IS OURS



THE CHOICE
IS OURS



THANK YOU!

Tim Kadlec

#codegarden19

@tkadlec