

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

UNITED STATES OF AMERICA, STATE OF
ARKANSAS, STATE OF CALIFORNIA,
STATE OF FLORIDA, STATE OF GEORGIA,
STATE OF INDIANA, COMMONWEALTH
OF KENTUCKY, STATE OF LOUISIANA,
STATE OF MICHIGAN, STATE OF
MISSISSIPPI, STATE OF MISSOURI, STATE
OF MONTANA, STATE OF SOUTH
CAROLINA, STATE OF TEXAS, AND
STATE OF WISCONSIN

Plaintiffs,

v.

GOOGLE LLC,

Defendant.

STATE OF COLORADO, STATE OF
NEBRASKA, STATE OF ARIZONA, STATE
OF IOWA, STATE OF NEW YORK, STATE
OF NORTH CAROLINA, STATE OF
TENNESSEE, STATE OF UTAH, STATE OF
ALASKA, STATE OF CONNECTICUT,
STATE OF DELAWARE, DISTRICT OF
COLUMBIA, TERRITORY OF GUAM,
STATE OF HAWAII, STATE OF ILLINOIS,
STATE OF KANSAS, STATE OF MAINE,
STATE OF MARYLAND,
COMMONWEALTH OF MASSACHUSETTS,
STATE OF MINNESOTA, STATE OF
NEVADA, STATE OF NEW HAMPSHIRE,
STATE OF NEW JERSEY, STATE OF NEW
MEXICO, STATE OF NORTH DAKOTA,
STATE OF OHIO, STATE OF OKLAHOMA,
STATE OF OREGON, COMMONWEALTH
OF PENNSYLVANIA, COMMONWEALTH
OF PUERTO RICO, STATE OF RHODE
ISLAND, STATE OF SOUTH DAKOTA,
STATE OF VERMONT, COMMONWEALTH
OF VIRGINIA, STATE OF WASHINGTON,

Case No. 1:20-cv-03010-APM

HON. AMIT P. MEHTA

[REDACTED]

Case No. 1:20-cv-03715-APM

HON. AMIT P. MEHTA

[REDACTED]

STATE OF WEST VIRGINIA, AND STATE
OF WYOMING

Plaintiffs,

v.

GOOGLE LLC,

Defendant.

PLAINTIFFS' COUNTERSTATEMENT OF MATERIAL FACTS

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Plaintiffs in both actions captioned above respectfully submit this Counterstatement of Material Facts, under Local Rule 7(h) of the United States District Court for the District of Columbia, in support of their opposition to the Motion for Summary Judgment filed by Defendant Google LLC (“Defendant” or “Google”).

I. OVERVIEW OF MARKETS

A. General Search Services Market

400.¹ General search services are offered by general search engines, which are “one-stop shops” consumers can use to search the internet for answers to a wide range of queries. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 177, 197–216; Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 90.

401. General search services are a unique, relevant product market. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 127–242.

402. A relevant geographic market for general search services consists of general search services provided to consumers in the United States. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 247–264.

403. After a user enters a query on a general search engine, results appear on a search engine results page (SERP). Pls. Ex. 133, Google Search website, How results are automatically generated.

¹ To avoid any overlap with the numbers in Defendants’ Statement of Undisputed Facts in Support of Its Motion for Summary Judgment (ECF No. 423), Plaintiffs begin their counterstatements at 400.

404. Google and Bing are the only significant U.S. general search engines that crawl and index the web, while other U.S. general search engines syndicate results. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 46–48.

405. The two leading U.S. general search engine companies today are Google and Bing, with smaller players including Yahoo!, DuckDuckGo, Brave, Ecosia, and Neeva. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 63, ¶¶ 46–48; Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶ 124.

406. Since 2010, Google has had an average annual market share of 80% or more in the U.S. market for general search services. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 66.

407. In 2020, Google’s share of the U.S. general search services market was nearly 90%, with an even higher share of 94% on mobile devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 433, Figs. 63, 66, 68.

408. Bing, Google’s closest competitor, has a U.S. general search services market share of roughly 6%, and it has not exceeded a 10% market share since 2015. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Figs. 63, 66.

409. On U.S. mobile devices, Bing’s market share is even smaller at roughly 1% in 2021, and it has not exceeded a 2% share since 2016. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 68.

B. Search Advertising And General Search Text Advertising

410. Most general search engines do not charge consumers a fee. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 26, 82, 129, 527, 1380.

411. When a consumer uses Google, the consumer provides Google data and attention in exchange for search results. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 125 & n.154, 1223.

412. Google monetizes a consumer’s data and attention by selling ads served in response to the consumer’s real-time query. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 82.

413. There is a search ads market that consists of advertising that is displayed on the SERP that general or specialized search engines return in response to consumer real-time queries. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 27–29 & § III.D.2.

414. There is a general search text ads market that is a narrower market wholly contained within the search ads market. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 30 & § III.D.3; Pls. Ex. 134, Jerath (DOJ Pls.’ Expert) Initial Report, ¶¶ 113–123.

415. There is a relevant geographic market for search ads served in response to queries from users located in the United States. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 382–387.

416. There is a relevant geographic market for general search text ads served in response to queries from users located in the United States. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 417.

417. General search text ads appear on the SERP of a general search engine and look much like the organic (non-advertising) search result links, i.e., they consist primarily of text and contain little or no pictures or other graphics. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 30, 85.

418. Google has a market share of roughly 74% in the U.S. search ads market and has had a share over 70% since 2015. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 468, Fig. 79.

419. Google has a market share of roughly 88% in the U.S. general search text ads market and has had a share of over 80% since at least 2016. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 474, Fig. 81.

420. Bing, Google’s closest competitor, has held a market share of less than 9% in the market for U.S. general search text ads since 2016. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 81.

421. Google earned approximately [REDACTED] in revenue worldwide from the sale of search ads in 2021. Pls. Ex. 135, Hammer (DOJ Pls.’ Expert) Initial Report, Fig. 7 & Appendix D, Schedule A.2.

422. Google generated approximately [REDACTED] in operating profits worldwide from the sale of search ads in 2021. Pls. Ex. 135, Hammer (DOJ Pls.’ Expert) Initial Report, Fig. 16 & Appendix D, Schedule A.2.

C. Scale In General Search Services

423. In the context of general search services, scale generally refers to the size of data a search engine cumulatively has access to when users interact with the search engine. Pls.

Ex. 245, [REDACTED] (Microsoft) Dep., 49:10–52:16 [REDACTED]
[REDACTED] Pls. Ex. 155, Giannandrea (Apple) Dep., 65:5–15 (stating that one way to describe scale “would be the number of queries that you have access to”).

424. Google’s scale in the general search services market exceeds its rivals by many multiples. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, § VII.B.1; Pls. Ex. 295, Oard (DOJ Pls.’ Expert) Frieder Rebuttal Report, ¶ 105 [REDACTED]

[REDACTED]

[REDACTED]

425. Since at least 2006, Google's employees have recognized that its scale gives it a significant competitive advantage. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 10, [REDACTED] (Microsoft) Dep.,

298:4–299:24, 330:18–332:4, 333:9–334:19.

428. Google’s scale advantage is particularly significant on mobile. Pls. Ex. 249, Booking.com document: Google, DOJ_BKNG-00001768, at 3 (“Google dominates the search landscape, particularly on mobile with 95% market share. Google’s global market share across all platforms as of August 2019 was 92%.”), at 5 (“Almost 1/3 of all mobile searches are related to location.”); Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 441, Figs. 68, 176; Pls. Ex. 9, [REDACTED] (Microsoft) Dep., 44:9–45:7 [REDACTED]

[REDACTED] Pls. Ex. 245, [REDACTED] (Microsoft) Dep., 234:12–235:8 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 345:11–346:12 (“ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] 398:11–399:15.

429. Mobile queries are substantively different than desktop queries. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 245, [REDACTED] (Microsoft)

Dep., 52:17–54:1 [REDACTED]

[REDACTED]

430. Mobile queries often have a location component. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 248, Varian (Google) Dep., 199:21–23 (“Q. Local queries

are more prevalent on mobile devices than on desktops; is that right? A. Yes.”); Pls. Ex. 245,

[REDACTED] (Microsoft) Dep., 232:17–234:4 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 323:12–326:14 [REDACTED]

[REDACTED]

431. Desktop user data is not a full substitute for mobile user data because user data (including search intent and interaction patterns) are substantially different when the consumer is searching on a mobile device than when the consumer is searching on a computer (i.e., a desktop or laptop). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 323:12–326:14; Pls. Ex. 245, [REDACTED] (Microsoft) Dep., 50:17–54:1; Pls. Ex. 295, Oard (DOJ Pls.’ Expert) Frieder Rebuttal Report, ¶¶ 192–193.

432. Google’s scale advantage is particularly significant for answering tail queries. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 983, 987–988, 1004–1009.

433. Tail queries are queries that occur rarely on general search engines. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 242, Lehman (Google) Dep., 240:21–241:12 (“A long-tail concept would be one that in our query stream as a whole, regardless of how it’s processed, it’s -- it’s a concept that’s not often mentioned. For example, a popular celebrity would be a -- not a long-tail concept. It

would be sort of -- some people call it a ‘head concept.’ On the other hand, like an obscure telegraph system from 1925, or something like that might be a long-tail concept.”).

434. Tail queries and mobile queries tend to overlap because, like tail queries, mobile queries tend to seek uncommon, granular, location-based information. Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 319:15–322:5 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 322:18–323:11 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
Pls. Ex. 9, [REDACTED] (Microsoft) Dep., 234:17–235:22 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

435. Access to user feedback for tail queries has a substantial effect on improving the search quality for tail queries. Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 239:10–241:11 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 295, Oard (DOJ Pls.’ Expert) Frieder Rebuttal Report, ¶¶ 32–33, 93–94.

436. The scale gap between Google and its competitors makes it difficult for the competitor search engines to match Google’s search quality. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

437. The scale gap between Google and its competitors makes it difficult for the competitor search engines to compete for users (increase scale). Pls. Ex. 22, Whinston (DOJ Pls.’

Expert) Initial Report, ¶¶ 968–1136; [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 9, [REDACTED] (Microsoft) Dep., 227:11–228:17 [REDACTED]

[REDACTED]; Pls. Ex. 10, [REDACTED]

(Microsoft) Dep., 254:8–255:11 [REDACTED]
[REDACTED] 263:21–264:6

(same).

437.1. “Because of diminishing returns to scale, Google benefits less from additional queries, than its rivals.” Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, ¶ 531; [REDACTED]

[REDACTED]

438. Search engines with greater scale attract more advertisers. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, § VII.B.3; Pls.

Ex. 256, Lowcock (IPG) Dep., 97:1–12 (“Q. So does the fact that Google has more users and more queries make the platform more -- more attractive to advertisers? A. Yes. Q. And is one of the reasons advertisers don’t purchase more text ads or search ads on Bing because it doesn’t have as many queries or users? A. Yes. Q. So is scale an important factor that advertisers consider when picking a search advertising platform? A. Yes.”); Pls. Ex. 7, [REDACTED]

(Microsoft) Dep., 50:6–51:2 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 245, [REDACTED] (Microsoft) Dep.,

49:15–50:10 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 165, Weinberg (DuckDuckGo) Dep., 323:4–25 (“[T]he more

volume we have in the marketplace, you think more advertisers will be attracted to the marketplace in general and that will increase the RPM.”); Pls. Ex. 246, [REDACTED]

[REDACTED] APLGOOGDOJ-00000091, at -092

438.1. Having more user-side data (i.e., more scale) allows search engine to better monetize ads. [REDACTED]

[REDACTED]; Pls. Ex. 258, Google presentation: Search Ads Boot Camp (Day 1) (*Q4 2019), GOOG-DOJ-23855303, at -539 (stating “Search Ads [heart] Data”); Pls. Ex. 146,

[REDACTED] Pls. Ex. 246, [REDACTED]

[REDACTED] Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 1070–1118, § VII.B.3.

439. Greater scale tends to increase advertising revenue. Pls. Ex. 146, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, § VII.B.3; Pls. Ex. 245, [REDACTED]

(Microsoft) Dep., 49:13–50:10 [REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 316, Gomes,

(Google) CID Dep., 77:6–24 (“[T]here was a belief that, as we improve the overall search experience, there is hope people come back to Google overall better, more often. So if we target overall growth, for instance, a search gets faster, if we are providing a better user experience, then people come back to us more often. And that includes for things like commercial queries.”);

Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 136:20–138:4 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

439.1. Earning more from each query allows search engines to pay more for distribution deals. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 1071–1072, 1177.

439.2. This allows search engines to secure distribution on browsers, desktop computers, and mobile devices, which, in turn, serves to capture even more search queries for the feedback loop. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 1165–1166, 1177.

440. With less revenue, rivals are predictably less able to invest in quality improvements that benefit consumers and advertisers. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 1071–1072; Pls. Ex. 246, [REDACTED]

II. OVERVIEW OF SEARCH DEFAULTS AND PREINSTALLATION

441. The most common way users access general search engines is through preinstalled search access points. Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, Fig. 100.

442. A search access point is a place on a device where a user can enter a search query. Pls. Ex. 70, Kolotouros (Google) Dep., 96:09–13, 97:18–98:16.

443. In 2005, OEMs had little interest in distributing Google search without financial incentives. Pls. Ex. 285, Google presentation: GPS – Mobile Topics (*June 16, 2005), GOOG-DOJ-01731480, at 2–4.

444. In 2005, OEMs demanded revenue share to distribute Google search. Pls. Ex. 285, Google presentation: GPS – Mobile Topics (*June 16, 2005), GOOG-DOJ-01731480, at 2–4.

445. Being the preset default search engine for a search access point on a preinstalled and prominently placed app is the most efficient and effective way for a search engine to reach users. Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶¶ 9–12, 37–39, 54–55, 59–62; [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; *see also* COMF ¶¶ 441–444, 446–470; Am.

Compl., ECF No. 94, Jan. 15, 2021, ¶ 47 (“Google admits that attaining a preinstalled search access point, depending on the setting, can encourage utilization of a service”).

446. In the United States, device distributors (e.g., Apple, OEMs, carriers) decide what apps—and therefore what search access points—to preinstall and where to place those apps on their devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 737, 810.

447. Before a device is sold to the consumer, a given preinstalled search access point on the device can be assigned a preset default search engine to which it will send queries entered by the consumer. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

448. When a user purchases an Apple iPhone, it comes with Apple’s Safari browser preinstalled, which has Google as the preset default search engine for queries that users enter in the URL address bar. Pls. Ex. 155, Giannandrea (Apple) Dep., 28:25–29:5, 106:19–22.

449. Most consumers stick with the preset default search engine that is assigned to each respective search access point on their device (also known as the default out of the box).

[REDACTED]
[REDACTED]; Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 261:13–262:17; Pls. Ex. 165, Weinberg (DuckDuckGo) Dep., 314:22–315:13; Pls. Ex. 156, Ramaswamy (Neeva) Dep., 70:4–72:2, 94:9–24; [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]; Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶¶ 131–132; Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 94:17–95:3 (explaining that “default status generally will lead to some increase in usage”); *see also* COMF ¶¶ 441–448, 450–470.

450. Consumers rely on habit in searching the internet. Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶¶ 9, 54–66 (“Given that consumers carry out these searches using familiar interfaces and devices, and that these searches provide immediate feedback, users’ search patterns become strongly habituated.”), 67–68; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 847.

451. Consumers often do not make (or even know that they can make) an explicit choice about which general search engine to use for a given search access point. [REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

452. Even where search users might want to change the preset default search engine for a given search access point, the effort and complexity involved with switching—referred to as “choice friction” by Plaintiffs’ expert Professor Antonio Rangel, PhD—biases users to stick with the default option. Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶¶ 37–39, 78–97, 131.

453. Google’s Chief Economist, Hal Varian, regularly reminded Google employees of the “power of defaults.” Pls. Ex. 248, Varian (Google), Dep., 267:6–16; Pls. Ex. 219, Email from Varian (Google), Re: Power of defaults (Mar. 27, 2007), GOOG-DOJ-05756465, at -465 (referring to Prof. Varian’s “power of defaults’ idea”).

454. Search defaults drive user traffic. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 846–965, § VII.A; Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 94:17–95:3 (explaining that “default status generally will lead to some increase in usage”).

455. Search defaults for search access points tend to be “stickier” on mobile devices than on PCs. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 465, Fig. 40.

456. Google routinely hires or contracts with behavioral economists to consider the impact of defaults. Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶¶ 25, 57; Pls. Ex. 286, [REDACTED] presentation: 2015 Round Up Full Deck (UNDATED), [REDACTED] 000001, at 1–3; Pls. Ex. 287, [REDACTED] presentation: Work on Mobile Growth (UNDATED), [REDACTED] 002874, at 1–3; Pls. Ex. 288, Google document: Maya Shanker Top-Line (UNDATED), GOOG-DOJ-27097514, at -514–515; Pls. Ex. 289, Google presentation: Google’s Behavioral Science Team: 2018 Google Ads Results (Dec. 2018), GOOG-DOJ-27097279, at -279.

457. [Intentionally Left Blank]

458. [Intentionally Left Blank]

459. [Intentionally Left Blank]

460. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

461. Users are unlikely to switch away from a device’s preset default search service. Pls. Ex. 23, Rangel (DOJ Pls.’ Expert) Initial Report, ¶ 131; Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 261:13–262:17; Pls. Ex. 165, Weinberg (DuckDuckGo) Dep., 314:22–315:13; Pls. Ex. 156, Ramaswamy (Neeva) Dep., 70:4–72:2, 94:9–24; *see also* Pls. Ex. 290, Miller (Google) Dep., 76:24–77:24.

462. Bing’s share of search queries is much higher on devices (such as Windows PCs and Amazon Fire tablets) where it is the preset default search engine for search access points.

Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 850–852, Fig. 142.

463. In Russia, Google’s agreement with regulators to introduce a search engine choice screen on Android devices caused Google’s share of Android searches to decline ██████████

██████████. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 953, Fig. 168.

464. Paying to have Google as the preset default search engine for search access points is the highest cost but highest value way to acquire users. Pls. Ex. 171, Google presentation: iOS Distribution- BD Opportunities (*July 2017), GOOG-DOJ-04279956, at -960.

465. Organic downloads, paid marketing, and app promotion/integration do not match the likelihood of success that being the preset default search engine has in getting consumers to use Google’s search engine. Pls. Ex. 171, Google presentation: iOS Distribution- BD Opportunities (*July 2017), GOOG-DOJ-04279956, at -960.

466. Google’s revenue share payments to device and browser distributors enable Google to reach more users. Pls. Ex. 317, Porat (Google) Dep. 26:13–30:1.

467. Reaching more users is a key part of Google’s consideration for the revenue share payment. Pls. Ex. 317, Porat (Google) Dep. 26:13–30:1.

468. If rivals won the defaults currently secured by the challenged terms of Google’s Distribution Agreements,² ██████████ of Google’s U.S. general search market share would shift to rivals. Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, Fig. 105, App. D, at D-16.

² As used herein, “Distribution Agreements” comprises, individually and collectively, Google’s Information Services Agreement, as discussed in Section III.B.2 herein; Google’s Mobile Application Distribution Agreements, as discussed in Section III.D.3 herein; and Google’s Revenue Share Agreements, as discussed in Section III.D.4. and Section III.E.2 herein.

469. Under its Android RSAs, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls.

Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, ¶¶ 403–405.

470. The size of the default effect is likely smaller on Mozilla’s Firefox browser than in other contexts because Firefox is a non-default browser, necessarily used only by people who are technologically savvy enough and motivated enough to override Windows’ default. Pls.

Ex. 24, Winston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 472.

III. GOOGLE’S DISTRIBUTION AGREEMENTS

A. Scope Of Google’s Distribution Agreements

471. In the United States, almost 50% of all queries made on general search engines are covered by the challenged terms of Google’s Distribution Agreements.³ Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 100.

472. In the United States, [REDACTED] of all queries made on general search engines are issued through the default on Chrome on Windows desktops and Apple desktops and mobile devices. Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 100.

3

[REDACTED] Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 100.

473. In the United States, roughly 70% of all mobile phone queries made on general search engines (a growing category of searches) are covered by the challenged terms of Google's Distribution Agreements.⁴ Pls. Ex. 89, Whinston (DOJ Pls.' Expert) Reply Report, Fig. 101.

474. In the United States, [REDACTED] of all mobile phone queries made on general search engines are issued through the default on Chrome for mobile Apple devices. Pls. Ex. 89, Whinston (DOJ Pls.' Expert) Reply Report, Fig. 101.

475. In 2020, [REDACTED] of all U.S. general searches went to Google Search through Google's search default in the Safari browser address bar. Pls. Ex. 89, Whinston (DOJ Pls.' Expert) Reply Report, Fig. 104.

476. In 2020, [REDACTED] of all U.S. general searches went to Google Search under its Distribution Agreements with carriers and Android OEMs. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, Fig. 160.

477. In 2020, [REDACTED] of all U.S. general searches went to Google Search under its Distribution Agreements with third-party browser companies (i.e., Mozilla, Opera, and UCWeb). Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, Fig. 161.

478. Google's share of all U.S. queries on Android phones is [REDACTED] Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, Fig. 142.

479. The Google search widget accounts for [REDACTED] of Google's query share on Android phones. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 741.

⁴ [REDACTED] Pls. Ex. 89, Whinston (DOJ Pls.' Expert) Reply Report, Fig. 101.

480. The Google search widget accounts for [REDACTED] of all U.S. Android queries [REDACTED]. COMF ¶¶ 478–479.

481. Chrome’s address bar accounts for [REDACTED] of Google’s Android query share. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 742.

482. Chrome’s address bar accounts for [REDACTED] of all U.S. Android queries [REDACTED] COMF ¶¶ 478, 481.

483. In 2020, the challenged terms of Google’s Distribution Agreements drove roughly [REDACTED] queries to Google.⁵ Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, Fig. 90.

484. Google’s control of search access points through its ownership of Chrome and Android, and its Distribution Agreements are significant barriers to entry and expansion by rivals and potential rivals. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 506–510.

485. As a result of Google’s Distribution Agreements, consumers are left with less choice than what they would see in a more competitive market. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, § VIII.A.

486. As a result of Google’s Distribution Agreements, consumers are left with less innovation than what they would see in a more competitive market. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, § VIII.A.

487. As a result of Google’s Distribution Agreements, consumers are left with lower-quality search offerings than what they would see in a more competitive market. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, § VIII.A.

⁵ [REDACTED] Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, Fig. 90.

488. [REDACTED]

[REDACTED]; Pls. Ex. 22, Winston (DOJ Pls.’ Expert) Initial Report, ¶¶ 1222–1238.

489. The absence of competition allows Google to raise the prices and reduce the quality of its search ads products. Pls. Ex. 22, Winston (DOJ Pls.’ Expert) Initial Report, ¶¶ 1332–1359.

490. In the United States, the challenged terms of Google’s Distribution Agreements cover roughly 36% of all U.S. search ad revenue.⁶ Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 102.

491. In the United States, default searches on Chrome on Windows desktops and Apple desktops and mobile devices account for [REDACTED] of all U.S. search ad revenue. Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 102.

492. In the United States, the challenged terms of Google’s Distribution Agreements cover roughly 45% of all general search text ad revenue.⁷ Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 103.

⁶ [REDACTED] Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 102.

⁷ [REDACTED] Pls. Ex. 89, Winston (DOJ Pls.’ Expert) Reply Report, Fig. 103.

493. In the United States, default searches on Chrome on Windows desktops and Apple desktops and mobile devices account for █████ of all general search text ad revenue. Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, Fig. 103.

B. Google’s Distribution Agreements With Apple

1. Apple’s Search Share And The Safari Browser

494. In 2020, █████ Google search queries in the United States were performed on Apple devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 134.

495. Roughly 60% of all mobile phones in the United States are iPhones. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 2.

496. Roughly 27% of all desktop computers in the United States are Macs. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 4.

497. Apple’s Safari browser is the only preinstalled browser on Apple devices. Pls. Ex. 25, Cue (Apple) Dep., 126:3–14.

498. Apple has never preinstalled third-party browsers, third-party search apps, or any other third-party apps on its devices. Pls. Ex. 25, Cue (Apple) Dep., 118:15–18 (“We don’t install any third-party apps. Never have on iOS.”), 126:7–10, 128:10–15; Pls. Ex. 3, Apple 30(b)(6) (Cue) Dep., 90:21–24 (stating with respect to Apple preloading third-party apps: “There are none. We would never do”), 92:15–22; Pls. Ex. 165, Weinberg (DuckDuckGo) Dep., 218:25–219:12.

499. Apple has no plans ever to preinstall third-party browsers, third-party search apps, or any other third-party apps on its devices. Pls. Ex. 25, Cue (Apple) Dep., 118:15–18, 126:7–10, 128:10–15; Pls. Ex. 3, Apple 30(b)(6) (Cue) Dep., 90:21–24, 92:15–22.

500. In 2020, [REDACTED] of Google’s total U.S. search query volume came from searches performed using the Safari browser’s address bar. Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, Fig. 90.

2. Google As Search Default On The Safari Browser

501. The Information Services Agreement (ISA) between Google and Apple, as amended, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

502. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

503. [REDACTED]

[REDACTED]
[REDACTED]

504. [REDACTED]

[REDACTED]
[REDACTED]

⁸ Siri is Apple’s voice assistant. Pls. Ex. 25, Cue (Apple) Dep., 44:9–13.

⁹ Spotlight is Apple’s universal search service that is used primarily to search on-device content, but also gives consumers the option of searching the internet. Pls. Ex. 155, Giannandrea (Apple) Dep., 89:10–91:6, 96:19–98:7; Pls. Ex. 25, Cue (Apple) Dep., 58:7–58:18.

505. [REDACTED]

[REDACTED]

506. [REDACTED]

[REDACTED]

507. [REDACTED]

[REDACTED]

508. [REDACTED]

[REDACTED]

509. Because Google is the preset search default on the Safari browser, a consumer using Safari can perform a query on a rival search engine only by either (a) navigating to that rival's website, or (b) changing the default search engine in Safari's settings. Pls. Ex. 24, Whinston (DOJ Pls.' Expert) Rebuttal Report, ¶ 412.

510. [REDACTED]

[REDACTED]

[REDACTED]

3. Google's Payments To Apple

511. Since 2005, Google has made payments to Apple to guarantee that it will be the exclusive preset default search engine for the Safari browser on Apple devices. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

512. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

513. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

514. In 2021, pursuant to the ISA, as amended, Google paid Apple approximately [REDACTED] for searches in the United States. Pls. Ex. 313, Decl. of Schmalbach (DOJ) (Jan. 26, 2023), Appendix A, Table 2.

515. [REDACTED]
[REDACTED]
[REDACTED] Pls. Ex. 313, Decl. of Schmalbach (DOJ) (Jan. 26, 2023), Appendix A, Table 1.

516. In 2021, Google's payments to Apple to be the preset default search engine for the Safari address bar pursuant to the ISA, as amended, constituted [REDACTED] of Apple's total operating income for the United States that year. Pls. Ex. 313, Decl. of Schmalbach (DOJ) (Jan. 26, 2023), Appendix A, Table 1 (indicating [REDACTED] in payments to Apple); Pls. Ex. 318, Apple 2021 Form 10-K, at 29 (indicating \$53.4 billion in operating income for the Americas).

517. In 2020, Google's payments to Apple pursuant to the ISA comprised [REDACTED]
[REDACTED] Pls. Ex. 175, [REDACTED]
[REDACTED], APLGOOGDOJ-01163132, at -144; Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 718 & Fig. 122.

518. Defendant's economic expert Prof. Murphy acknowledged that [REDACTED]
[REDACTED]

[REDACTED]

519. In 2021, the total global revenue for Microsoft’s “search and news advertising” business, which includes Microsoft Bing, was approximately \$9.3 billion. Pls. Ex. 176, Microsoft 2022 10-K, at 95.

520. [REDACTED]

Pls. Ex. 9, [REDACTED] (Microsoft) Dep., 239:4–244:22.

521. [REDACTED] Pls. Ex. 9, [REDACTED] (Microsoft) Dep., 239:4–244:22.

4. Consideration Of The Value Of The Safari Search Default During Negotiations With Apple

522. During negotiations with Apple [REDACTED], Google’s search finance team modeled the value of Google being the search default for the Safari browser. [REDACTED]

[REDACTED]

523. During negotiations with Apple [REDACTED], when modeling the value of Google being the search default for the Safari browser, Google’s search finance team predicted that Google would recover (or “claw back”) [REDACTED] of the revenue that it had previously earned from queries conducted through the Safari search default if it lost this position, representing a potential loss to Google of [REDACTED] in net revenue. [REDACTED]

524. After conducting negotiations with Apple [REDACTED], Google to agree to share [REDACTED] of its revenue with Apple to secure Safari’s search default. [REDACTED]

525. Google is not currently aware of a better estimate for the impact of losing the Safari browser search default than the one conducted during Google’s [REDACTED] negotiations with Apple. Pls. Ex. 209, Google 30(b)(6) (Roszak) Dep., 93:15–94:17, 99:5–11.

526. [REDACTED] Pls. Ex. 175, [REDACTED] APLGOOGDOJ-01163132, at -174–179.

527. [REDACTED] Pls. Ex. 175, [REDACTED] APLGOOGDOJ-01163132, at -176.

528. [REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 175, [REDACTED]

[REDACTED] APLGOOGDOJ-01163132, at -177.

529. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *see also* Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 894–898, Figs. 155–157.

530. [REDACTED]

[REDACTED] Pls. Ex. 5, [REDACTED] (Microsoft) Dep. (Vol. I), 96:10–99:5, 133:12–134:8; Pls. Ex. 6, [REDACTED] (Microsoft) Dep. (Vol. II), 88:21–92:8, 259:22–261:15; Pls. Ex. 7, [REDACTED] (Microsoft) Dep., 59:25–61:7, 85:6–85:16, 111:5–115:9, 140:1–142:9, 162:3–163:24, 193:9–196:17, 246:3–247:4; Pls. Ex. 8, [REDACTED] (Microsoft) Dep., 128:15–132:21, 134:16–136:6, 138:10–144:16, 159:15–160:1, 281:15–283:11, 311:02–323:23, 343:18–345:25; Pls. Ex. 9, [REDACTED] (Microsoft) Dep., 10:12–11:13, 44:9–47:12, 50:7–59:8, 68:4–69:5, 88:5–90:15, 106:6–107:12, 114:17–115:1, 132:23–135:8, 137:11–141:11, 146:16–151:14, 233:14–235:22, 237:2–238:25 Pls. Ex. 10, [REDACTED] (Microsoft) Dep., 91:22–95:23, 102:2–105:23, 121:11–129:6, 243:2–252:7.

531. [REDACTED]

[REDACTED] Pls. Ex. 5, [REDACTED] (Microsoft) Dep. (Vol. I), 96:10–99:5, 133:12–134:8; Pls. Ex. 6, [REDACTED] (Microsoft) Dep. (Vol. II), 83:13–92:8,

259:22–261:15; Pls. Ex. 7, ██████████ (Microsoft) Dep., 59:25–61:7, 111:5–115:9, 140:1–142:9, 162:3–163:24, 193:9–196:17, 246:3–247:4; Pls. Ex. 8, ██████████ (Microsoft) Dep., 129:15–132:21, 134:15–136:6, 138:10–144:16, 281:15–283:11, 311:1–323:23, 343:18–345:25; Pls. Ex. 9, ██████████ (Microsoft) Dep., 10:11–11:13, 44:9–47:12, 50:7–59:8, 68:4–69:5, 88:5–90:15, 106:6–107:12, 114:17–115:1, 132:23–135:8, 137:11–141:11, 146:16–151:14, 233:10–235:22, 237:1–238:25 Pls. Ex. 10, ██████████ (Microsoft) Dep., 91:22–95:23, 102:2–105:23, 121:11–129:6, 243:2–252:7.

532. If Google had lost the Safari search default to another general search engine in 2020, this would have led to a shift of ██████████ of all U.S. search traffic, with Google losing ██████████ of the U.S. queries that it had previously captured through the Safari search default on Apple’s mobile devices, and losing ██████████ of the U.S. queries that it had previously captured through the Safari search default on Apple’s macOS devices (desktops and laptops). Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 888–901 & Fig. 158; Pls. Ex. 89, Whinston (DOJ Pls.’ Expert) Reply Report, App. D, at D-16, Fig. 104.

533. Prof. Murphy contends that Prof. Whinston’s estimate of the impact of the Safari default is flawed. Pls. Ex. 139, Murphy (Def.’s Expert) Rebuttal Report, ¶¶ 154–158.

534. In his deposition, Prof. Murphy described Google’s ordinary-course projections regarding the impact of defaults as representing “somebody’s estimate” that may be “seat-of-the-pants ideas” or “a way of justifying what they felt they needed to do,” and stated that if Google “relied upon” these projections in negotiating its distribution agreements, this would not change his willingness to accept them if he believes they were “mistaken.” Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 366:3–368:6.

535. When Google has considered how Apple thinks about the Safari default to inform Google’s negotiation strategy, Google has analyzed the financial implications to Apple. [REDACTED] Ex. 178, Google presentation: NYC [Apple] Overview, Risks, and Opportunities (Oct. 2017), GOOG-DOJ-09093108, at -114–115.

536. Prof. Murphy claims that “Apple in essence acts as a collective bargaining agent for consumers” when negotiating with Google. Pls. Ex. 67, Murphy (Def.’s Expert) Initial Report, ¶ 238.

537. [REDACTED] Pls. Ex. 25, Cue (Apple) Dep., 217:9–220:2.

538. [REDACTED] Pls. Ex. 25, Cue (Apple) Dep., 217:2–220:2.

539. [REDACTED] Pls. Ex. 3, Apple 30(b)(6) (Cue) Dep., at 26:8–28:3.

540. [REDACTED]

541. [REDACTED]

[REDACTED]

[REDACTED]

542. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

543. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

544. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

545. At various points in negotiating the ISA and its amendments, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

553. When a dominant search supplier wins an exclusionary contract with a search distributor, its market power is strengthened, and it may gain or protect monopoly profits. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 296.

554. If a dominant search supplier’s rival wins an exclusionary contract and gains strength as a competitor, the most it can hope for is competitive profits. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 296.

555. As a result of the asymmetry between the outcome if a dominant search supplier wins or if rivals win an exclusionary contract, even if the dominant supplier and the rival are equally efficient, profits are greater when the dominant supplier wins than when a rival wins, and therefore the dominant supplier can offer the distributor more than rivals for the exclusionary contract. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 296.

556. A “public good” is a commodity or service that is made available to all members of a society. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 291 n.400.

557. Preservation of competition in general search is a public good. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 291.

558. Consumers experience the benefits of competition in the form of lower prices and increased quality. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 291 & n.400.

559. A search distributor’s decision to enter into an exclusionary contract affects the competitive process as a whole, meaning the interests of all consumers are at stake. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶¶ 291–293.

560. Even if a distributor were viewed as a “collective bargaining agent” for its own customers, the distributor would not factor in the interests of all consumers when entering into an exclusionary contract. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶¶ 291–293.

561. No party fully factors in the harm that consumers as a whole stand to incur as a result of a reduction in general search competition. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶¶ 291–293.

562. Because no party fully factors in the harm that consumers as a whole stand to incur as a result of a reduction in general search competition, each party is individually more willing to sign an exclusionary contract with Google than would otherwise be the case. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶¶ 291–293.

563. Prof. Murphy has written that “competition by a dominant supplier for exclusivity sometimes may result in harm to consumers.” Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶ 297 (quoting Klein, Benjamin & Kevin Murphy, “How Exclusivity Is Used To Intensify Competition For Distribution -- Reply To Zenger,” *Antitrust Law Journal* 77, no. 2 (2011): 691–699).

564. In his deposition, Prof. Murphy testified that the presence of multiple bidders for a contract is not sufficient to demonstrate that conduct should be deemed permissible competition on the merits. Pls. Ex. 24, Whinston (DOJ Pls.’ Expert) Rebuttal Report, ¶¶ 296–297; Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 414:20–415:14 (“Q. If there are multiple bidders for a contract and one wins, will that always represent competition on the merits? A. No. I think you have to look at other things, and I looked at other things here.”).

564.1. In his Rebuttal Report, Prof. Whinston quoted Prof. Murphy, who had stated, “Plaintiffs appear to equate foreclosure with the ‘coverage’ of Google’s arrangements. But the queries that those arrangements ‘cover’ is not an economically sensible measure of foreclosure.” Pls. Ex. 24, Whinston (Pls.’ Expert) Rebuttal Report, ¶ 322 (quoting Pls. Ex. 67, Murphy (Def.’s Expert) Initial Report, ¶ 57). Prof. Whinston stated that he agreed with the quotation only “[t]o

the extent that” Prof. Murphy was arguing that absent Google’s contracts, rivals would not have won “*all* of the search traffic that the contracts cover.” *Id.*

564.2. Prof. Murphy’s reports contain no citation for his assertion that “the extent of potential foreclosure should be limited to the share of sales for which (1) rivals are anticompetitively denied the ability to compete in the actual world and (2) would be able to compete successfully in the but-for world.” Pls. Ex. 67, Murphy (Def.’s Expert) Initial Report, ¶ 732.

564.3. When asked in his deposition to provide a source to support his assertion that “the extent of potential foreclosure should be limited to the share of sales for which (1) rivals are anticompetitively denied the ability to compete in the actual world and (2) would be able to compete successfully in the but-for world,” Prof. Murphy “[could not] think of a specific cite for it.” Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 393:5–394:6 (discussing Pls. Ex. 67, Murphy (Def.’s Expert) Initial Report, ¶ 732).

D. Google’s Android Distribution Agreements

565. In 2020, [REDACTED] of all Google search queries in the United States were performed on Android devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 829, Fig. 134.

566. In the United States, the vast majority of Android devices are sold to consumers by carriers. Pls. Ex. 121, Google presentation: Android Agreements Explainer - ACC, MADA, RSA, DCB (Feb. 2, 2018), GOOG-DOJ-28380959, at -968, -977.

567. In the United States, carriers purchase Android devices from OEMs. Pls. Ex. 121, Google presentation: Android Agreements Explainer - ACC, MADA, RSA, DCB (Feb. 2, 2018), GOOG-DOJ-28380959, at -968, -977.

[REDACTED]

569. The MADAs and RSAs are a “belt and suspenders” approach to distributing Google Search on Android devices. [REDACTED]

[REDACTED]

[REDACTED]

1. Android Operating System And Devices

570. Android is a mobile operating system that Google acquired in 2005. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 725.

571. In 2008, Google released the Android operating system code for free, creating the Android Open Source Project (AOSP). Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 725.

572. Any manufacturer can use AOSP for its mobile devices. Pls. Ex. 121, Google presentation: Android Agreements Explainer - ACC, MADA, RSA, DCB (Feb. 2, 2018), GOOG-DOJ-28380959, at -963.

573. Since releasing AOSP, over time Google has placed newly developed features exclusively within its proprietary apps and services (collectively, referred to as Google Mobile Services (GMS)), and has not made those features available through AOSP. Pls. Ex. 121, Google

presentation: Android Agreements Explainer - ACC, MADA, RSA, DCB (Feb. 2, 2018), GOOG-DOJ-28380959, at -966.

574. Within GMS, Google Play Services (GPS) helps support the functionality of all Android apps, e.g., enabling cloud messaging and location manager functionalities. Pls. Ex. 64, Google presentation: Android Review (*Nov. 5, 2019), GOOG-DOJ-06465054, at -066; Pls. Ex. 99, Jung (Google) Dep., 62:25–63:20.

575. GPS is used by hundreds of thousands of third-party apps. Pls. Ex. 64, Google presentation: Android Review (*Nov. 5, 2019), GOOG-DOJ-06465054, at -066; Pls. Ex. 99, Jung (Google) Dep., 62:25–63:20.

576. Google’s proprietary version of the Android operating system (Android), which includes GMS, is the only licensable mobile operating system in common use in the United States. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 54, Figs. 2–3 (StatCounter Global Stats).

577. The only viable Android app store in the United States is Google’s Play Store, which OEMs and carriers deem necessary for producing a sellable mobile device. Pls. Ex. 77,

[REDACTED]

[REDACTED] Pls. Ex. 61, Christensen (Motorola) Dep., 157:11–

158:2.

578. Unlike Android, AOSP does not have an app store. Pls. Ex. 56, Davies (DOJ Pls.’ Expert) Initial Report, ¶ 57; Pls. Ex. 121, Google presentation: Android Agreements Explainer - ACC, MADA, RSA, DCB (Feb. 2, 2018), GOOG-DOJ-28380959, at -966.

579. Unlike Android, AOSP does not have the GPS application programming interfaces that many third-party Android apps require. Pls. Ex. 64, Google presentation: Android

Review (*Nov. 5, 2019), GOOG-DOJ-06465054, at -066–067; Pls. Ex. 99, Jung (Google) Dep., 62:25–63:20.

580. Other than Apple devices, phones and tablets with the Android operating system make up nearly the entire remaining mobile device marketplace in the United States. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 54, Figs. 2–3 (StatCounter Global Stats).

2. Google’s Chrome Browser

581. In the United States, Google’s Chrome browser accounts for roughly 50% of browser usage and 60% of desktop browser usage. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 6.

582. [REDACTED]

3. Google’s Mobile Application Distribution Agreements (MADA)

583. Virtually all Android devices sold in the United States have GMS preinstalled and are built under the MADA. Pls. Ex. 158, Email from Braddi (Google), Re: assistant (Aug. 7, 2018), GOOG-DOJ-06446636, at -636; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 727; Pls. Ex. 70, Kolotouros (Google) Dep., 31:7–10.

584. Under the MADA, if an OEM preinstalls any Google app on an Android device, the OEM must: (1) put on the device’s home screen (a) Google’s search widget (a search bar or box), (b) the Play Store, and (c) an icon labeled “Google” that provides direct access to preinstalled Google apps; and (2) preinstall 11 Google apps, including the Google Search App (GSA) and Google’s Chrome browser. *See, e.g.*, [REDACTED]

[REDACTED] Pls. Ex. 160,

Def.'s Resp. to Pls.' Second Set of Contention Interrogatories (Apr. 27, 2022), at 20–21 (response to Contention Interrogatory No. 19).

585. [REDACTED]

586. The search widget is the single most important search access point on an Android device. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 741.

587. The default search engine on the Google search widget cannot be changed from Google. Pls. Ex. 209, Google 30(b)(6) (Roszak) Dep., 58:22–59:20.

588. The home screen is the most prominent and valuable real estate on an Android phone. [REDACTED] Pls. Ex. 61, Christensen (Motorola) Dep., 98:1–10; Pls. Ex. 211, [REDACTED] Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 754.

589. Under the MADA, the Google search widget to occupy an entire row (three-to-five slots) on the home screen. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 754.

590. [REDACTED]

Browser, Samsung's proprietary browser. Pls. Ex. 72, Google presentation: Healthy Android (Oct. 2017), GOOG-DOJ-03505506, at -518; [REDACTED]

596. Samsung is a leading manufacturer of Android devices sold in the United States. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 79, Fig. 8.

597. Samsung has a MADA. [REDACTED]

598. Motorola is a leading manufacturer of Android devices sold in the United States. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 79 Fig. 8.

599. Motorola has a MADA. [REDACTED]

600. LG, which used to be a leading Android OEM, also had a MADA, but LG exited the smartphone business in 2020. [REDACTED]; Pls. Ex. 70, Kolotouros (Google) Dep., 144:5–12; Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 79 Fig. 8; Pls. Ex. 159, Google presentation: Android Staples (Aug. 2021), GOOG-DOJ-30356083, at -092.

601. Having two browsers (Chrome and S-Browser) already preinstalled on its Android devices deters Samsung from preinstalling a third-party browser, [REDACTED]; Pls. Ex. 125, Google document: Notes from Samsung MADA discussion on 7/13, 2016 (July 13, 2016), GOOG-DOJ-32294385, at -386–387; [REDACTED]

[REDACTED]; [REDACTED]
[REDACTED]
[REDACTED]

4. Google’s Revenue Share Agreements (RSA)

602. Under its RSAs with carriers and OEMs, Google makes monthly payments to the counterparty in exchange for Google being (1) the exclusive general search engine preinstalled on Android devices covered by the RSA, as well as (2) the search default for all search access points on such devices. Pls. Ex. 55, Pichai (Google) Dep., 199:8–11; Pls. Ex. 212, Barton (Google) Dep., 136:3–19; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 761–762, 786.

603. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

604. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

605. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

606. Google's RSAs with carriers cover Android devices that the carriers purchase from OEMs and sell to consumers. Pls. Ex. 121, Google presentation: Android Agreements Explainer - ACC, MADA, RSA, DCB (Feb. 2, 2018), GOOG-DOJ-28380959, at -968; Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 767.

607. Google's RSAs with OEMs cover Android devices that OEMs sell directly to U.S. consumers. Pls. Ex. 213, [REDACTED] Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 767.

608. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

609. Some RSAs have allowed the counterparty to earn Google revenue share on a device-by-device basis. [REDACTED]

[REDACTED]

610. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

611. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 77, 79–81, 786; [REDACTED]

[REDACTED]

[REDACTED]

5. Google’s Payments To Android Partners Under RSAs

612. In 2020, pursuant to its RSAs, Google paid [REDACTED] to carriers for Google to be the exclusive preset default search engine on Android devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 718, Fig. 122.

613. In 2020, pursuant to its RSAs, Google paid [REDACTED] to OEMs for Google to be the exclusive preset default search engine on Android devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 718, Fig. 122.

6. Consideration Of The Value Of The Search Default On Android Devices

614. Google recognizes the “power of the defaults” to drive search traffic to a particular search engine. Pls. Ex. 219, Email from Varian (Google), Re: Power of defaults (Mar. 27, 2007), GOOG-DOJ-05756465, at -465.

615. [Intentionally Left Blank]

616. [REDACTED]

[REDACTED]

617. A search engine having preset default status leads to increased usage of that search engine. Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 94:21–95:3 (“I think, in general, what we’ve seen, and from the empirical evidence, as well as the underlying economics, would be that default status generally will lead to some increase in usage.”).

618. Google’s employees recognize that default behavior influences some users and brings more searches to Google. Pls. Ex. 290, Miller (Google) Dep., 76:24–77:24.

619. Prof. Murphy claims that, if rivals were preset as the search defaults on Android devices, they would receive an additional [REDACTED] of the queries on those devices. Pls. Ex. 87, Murphy (Def.’s Expert) Dep., 533:17–534:12; Pls. Ex. 301, Murphy (Def.’s Expert) Reply Report, ¶¶ 20, 87, 226.

620. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

621. [REDACTED] if Google were to lose the preset search defaults on all U.S. Android devices, Google would lose between [REDACTED] of all U.S. search traffic. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 160.

622. Google is a public company and pays [REDACTED] pursuant to its RSAs to secure search defaults on Android devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 718, Fig. 122.

623. Preset search defaults on desktops are easier to change than preset search defaults on mobile devices due to the large screen sizes on desktops. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; [REDACTED]

[REDACTED]

[REDACTED]

624. Bing’s share of search traffic on Windows PCs (desktops and laptops), where it is the default search service, is [REDACTED] higher than its share on macOS devices (desktops and laptops), where Google is the default. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 142; *see also* Pls. Ex. 266, Baker (Colo. Pls.’ Expert) Initial Report, ¶ 260 & Table 22; Pls. Ex. 267, Baker (Colo. Pls.’ Expert) Reply Report, ¶ 117 & n.294.

625. The poor performance of the Internet Explorer browser likely contributed to a higher rate of users switching to alternative browsers on Windows than on other platforms. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 459–462.

626. Google was able to benefit from shortcomings in the Internet Explorer browser through its distribution agreements with nearly every alternative browser used on Windows as well as its ownership of the Chrome browser. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶ 462; [REDACTED]

[REDACTED]

627. [Intentionally Left Blank]

628. [REDACTED]

[REDACTED] Pls. Ex. 244, Email from [REDACTED], NO SUBJECT (July 26, 2019), [REDACTED]-00057003, at -003-004 (describing [REDACTED])

629. Google is [REDACTED] in its demands for search exclusivity on Android devices sold by Verizon. Pls. Ex. 63, [REDACTED], 148:12-21.

630. [REDACTED]

631. [REDACTED] Pls. Ex. 225, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

632. [REDACTED]

[REDACTED]

[REDACTED]

E. Google’s Browser Distribution Agreements

633. Since the early 2000s, Google has entered into revenue share agreements with third-party browser companies, such as Opera (2001), Mozilla (2004), and UCWeb ([REDACTED]). Def. Ex. 32, 2004 Mozilla Browser RSA (Nov. 8, 2004), MOZ-LIT-037219; Pls. Ex. 28, Baker (Mozilla) Dep., 62:1–18; Pls. Ex. 226, Opera Press Release, “Opera and Google renew search agreement” (Dec. 20, 2021) (“Opera has had a search distribution agreement with Google (NASDAQ: GOOGL) since 2001.”); [REDACTED]; [REDACTED]; *see also* Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 813–822 (cataloguing Google’s contracts with third-party browsers).

1. Third-Party Browsers

634. As of December 2021, third-party browsers accounted for approximately 5% of U.S. browser usage across all devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 6.

635. As of December 2021, Mozilla’s Firefox was the most popular third-party browser. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, Fig. 6.

636. [Intentionally Left Blank]

637. [Intentionally Left Blank]

638. [Intentionally Left Blank]

639. [Intentionally Left Blank]

640. [Intentionally Left Blank]

641. [Intentionally Left Blank]

642. Although third-party browsers account for only approximately 5% of U.S. browser usage, they represent the largest distribution vehicle for general search engines, after accounting for distribution channels controlled by Google, Apple, and Microsoft. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 739–744, Figs. 6, 134.

643. Searches on Mozilla’s Firefox browser are conducted almost entirely on computers, rather than mobile devices. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 865 n.1129; *see also* Pls. Ex. 28, Baker (Mozilla) Dep., 134:9–20.

644. Third-party browsers like Mozilla generally do not come preinstalled on devices (which come with a different preinstalled browser out of the box). Pls. Ex. 28, Baker (Mozilla) Dep., 136:11–15, 137:8–23; Pls. Ex. 182, Mozilla presentation: Protecting the Open Web: Threats to Browser Competition (Dec. 18, 2019), MOZ-002390, at -403.

645. It is difficult for third-party browsers to compete with preinstalled browsers on mobile devices because if third-party browsers are not preinstalled on a device out of the box, users must find the browser, obtain it, and install it. Pls. Ex. 28, Baker (Mozilla) Dep., 139:20–140:24.

2. Google’s RSAs With Third-Party Browsers

646. Google’s revenue share agreements with third-party browser companies guarantee that Google will be the preset default search engine across all search access points on the respective browser (namely the URL address bar), for nearly all instances when the browser is installed by users on their devices. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; *see also* Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 815–822.

647. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

648. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

649. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. Google’s Payments To Third-Party Browsers

650. In 2020, Google paid third-party browser companies approximately [REDACTED] [REDACTED] pursuant to revenue share agreements concerning Google preset default search placements on the counterparties’ browsers. Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶ 718, Fig. 122.

651. Roughly [REDACTED] of Mozilla’s annual revenue comes from its revenue share agreement with Google, in exchange for making Google the preset default search engine on Firefox. Pls. Ex. 28, Baker (Mozilla) Dep., 41:18–24.

652. Google's revenue share agreement with Mozilla concerning Google preset default search placements on Firefox accounted for roughly [REDACTED] of Mozilla's royalty revenues in 2018 and 2019. Pls. Ex. 230, Mozilla document: Mozilla 2019 and 2018 Consolidated Financial Statements (Oct. 16, 2020), MOZ-LIT-000263, at -291.

653. Mozilla has recognized what it described as the [REDACTED] in search, has expressed concern about its [REDACTED] and has sought to find [REDACTED] Pls. Ex. 231, Mozilla presentation: Strategic Development: Search Negotiations (Oct. 2014), MOZ-LIT-000903, at 5–6; *see also* Pls. Ex. 234, Email from Bautista (Mozilla), Should we invest [REDACTED] (Apr. 6, 2020), MOZ-LIT-009028, at -028

[REDACTED]

[REDACTED]

4. Consideration Of The Value Of The Search Default On Third-Party Browsers

654. If Google lost the preset default search position on third-party browsers, Google would lose between [REDACTED] of the search traffic that it had previously captured through those defaults on desktop computers. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶¶ 908–911, Fig. 161.

655. If Google lost the preset default search position on third-party browsers, Google would lose between [REDACTED] of the search traffic that it had previously captured through those defaults on mobile devices. Pls. Ex. 22, Whinston (DOJ Pls.' Expert) Initial Report, ¶¶ 908–911, Fig. 161.

656. Google estimates that losing its position as the preset default search engine on the Opera browser would [REDACTED] from Opera at risk. Pls. Ex. 232,

Google presentation: Search Headwinds & Challenges (May 2015), GOOG-DOJ-13128963, at -989.

657. [REDACTED]

[REDACTED] Def. Ex. 43, Mozilla document: Project Waldo – Phase 1 Final Review (Mar. 2, 2022), MOZ-LIT-045096, at -102–103; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 875–876; Pls. Ex. 67, Murphy (Def.’s Expert) Initial Report, ¶¶ 299–305.

658. The year after Mozilla switched the search default on Firefox from Google to Yahoo in 2014, Google lost approximately [REDACTED] of the search traffic that it had previously captured through the Firefox search default, which cost Google approximately [REDACTED] in search ad revenue. Pls. Ex. 168, Google presentation: UNTITLED (*Apr. 2019) (Assistant conjoint analysis), GOOG-DOJ-02800065, at -071; Pls. Ex. 233, Google presentation: Firefox/Yahoo (May 2015), GOOG-DOJ-04248388, at -389; Pls. Ex. 22, Whinston (DOJ Pls.’ Expert) Initial Report, ¶¶ 862–864, 869 & Figs. 145–147.

659. When Mozilla switched the search default on Firefox from Google to Yahoo in 2014, Mozilla made the change [REDACTED] [REDACTED] Pls. Ex. 231, Mozilla presentation: Strategic Development: Search Negotiations (Oct. 2014), MOZ-LIT-000903, at 5–6.

660. When Mozilla switched the search default on Firefox from Google to Yahoo in 2014, Mozilla believed that [REDACTED] and hoped to use this event as an [REDACTED] Pls. Ex. 243, Mozilla document: Mozilla Opening Mediation Brief in *Yahoo v. Mozilla* (July 17, 2019), MOZ-

LIT-000296, at -302; Pls. Ex. 231, Mozilla presentation: Strategic Development: Search Negotiations (Oct. 2014), MOZ-LIT-000903, at 6.

661. Sometime after switching the search default on Firefox from Google to Yahoo in 2014, Mozilla ceased to view Yahoo as a viable search default for Firefox and switched that default back to Google. Pls. Ex. 28, Baker (Mozilla) Dep., 81:6–22, 271:8–272:2; *see also id.* at 224:23–225:4.

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Respectfully submitted,

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