



Bureau of Competition

UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION
WASHINGTON, D.C. 20580

Project Code: DXI

MEMORANDUM

TO: Commission

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DATE: August 8, 2012

SUBJECT: Google Inc.
File No. 111-0163¹

RECOMMENDATION: That the Commission Issue the Attached Complaint

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EXECUTIVE SUMMARY

Google Inc. (“Google”) is the world’s dominant Internet search engine and seller of search advertising. Staff has investigated several allegations of anticompetitive conduct by Google. Four of the five main areas are addressed by this memorandum, while Google’s mobile conduct will be addressed in a supplemental memorandum.

Staff’s recommendations are premised on our conclusion that Google has monopoly power in three relevant antitrust markets in the United States: Horizontal Search; Search Advertising; and Syndicated Search and Search Advertising.

First, Staff has investigated whether Google has unlawfully preferenced its own content over that of rivals, while simultaneously demoting rival websites. Complainants have alleged that this conduct has impaired their ability to compete effectively in the markets for general search and search advertising. Although it is a close call, we do not recommend that the Commission proceed on this cause of action because the case law is not favorable to our theory, which is premised on anticompetitive product design, and in any event, Google’s efficiency justifications are strong. Most importantly, Google can legitimately claim that at least part of the conduct at issue improves its product and benefits users.

Second, Staff has investigated whether Google has unlawfully “scraped,” or appropriated, the content of vertical rivals in order to improve its own vertical products. We conclude that Google’s conduct should be condemned as a conditional refusal to deal under Section 2 because (i) Google’s prior voluntary course of dealing with vertical rivals offers clear evidence that the relationship was mutually beneficial, (ii) Google’s threats to remove rival content from its general web search results was designed solely to coerce rivals into allowing Google to use their content for Google’s competing vertical product, and (iii) the

natural and probable effect of Google's conduct is to diminish the incentives of vertical websites to invest in, and to develop, new and innovative content. In the alternative, Google's conduct may be condemned as a stand-alone violation of Section 5. Google has presented no efficiency justification for its conduct.

Third, Staff has investigated whether Google has employed anticompetitive contractual restrictions on the automated cross-management of advertising campaigns. Google's main rival (Microsoft) has alleged that Google is denying Microsoft critical scale by employing these restrictions, and thus impairing Microsoft's ability to compete effectively in the markets for general search and search advertising. We conclude that these restrictions should be condemned under Section 2 because they limit the ability of advertisers to make use of their own data, and as such, have reduced innovation and increased transaction costs among advertisers and third-party businesses, and also degraded the quality of Google's rivals in search and search advertising. Google's proffered efficiency justification for these restrictions appears to be pretextual.

Fourth, Staff has investigated whether Google has entered into anticompetitive, exclusionary agreements with websites for syndicated search and search advertising services. We conclude that Google's agreements should be condemned under Section 2 because they foreclose some portion of the market, and, although the agreements result in only modest anticompetitive effects on publishers, the impact of the agreements in denying scale to competitors is both competitively significant to its main rival (Microsoft) today, as well as a significant barrier to entry for potential entrants in the longer term. While Google presents efficiency justifications for these agreements, on balance, Staff finds them to be non-persuasive.

Staff has identified several possible remedies to Google's conduct. Specifically, for Google's scraping conduct, Google could be required to provide an "opt-out" feature to remove "snippets" of website content (*i.e.*, user reviews, ratings) from Google's vertical properties, while retaining the snippets in Google's web search results and/or its Universal Search results on the main search results page. Google could also be required to more generally limit the use of the content it indexes for its web search results. For Google's campaign management restrictions, Google could be required to remove the problematic contractual restrictions from its license agreements. For Google's exclusionary syndication agreements, Google could be enjoined from entering into exclusive agreements with search syndication partners, and required to substantially loosen restrictions surrounding syndication partners' use of rival search advertisements.

There are a number of substantial risks associated with bringing a case against Google. Most notably, Google will be able to argue that Microsoft's most efficient distribution channel is Bing.com; and that any scale Microsoft might gain through the elimination of the challenged restrictions and agreements will be immaterial to improving Bing's competitive position.

Nevertheless, Staff concludes that Google's conduct has resulted – and will result – in real harm to consumers and to innovation in the online search and advertising markets. Therefore, Staff recommends that the Commission issue the attached complaint.

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I. HISTORY OF THE INVESTIGATION AND RELATED PROCEEDINGS

A. FTC INVESTIGATION

The Commission authorized the use of compulsory process in this investigation on June 13, 2011.¹ Since then, the Commission has issued subpoenas to Google, Microsoft, and Yahoo!, along with multiple Internet content providers (such as Amazon, eBay, and NexTag), mobile device manufacturers (such as Apple, Motorola Mobility, and Samsung), and wireless carriers (such as Verizon and AT&T).²

Over the course of Staff's investigation, we have received well over two million documents (over 9.5 million pages) in total – and have reviewed many thousands of those documents – from Google and a myriad of third parties. In addition, Staff reviewed documents produced to the Department of Justice in the Google-Yahoo! (2008) and ITA (2010) investigations, and documents produced in response to the ongoing investigations being conducted by the European Commission and a number of U.S. states (see below).

Staff has also met with and interviewed dozens of parties, including vertical competitors in the travel, local, finance, and retail sectors; major U.S. advertisers and advertising agencies; many of Google's largest U.S. syndication and distribution partners; and mobile device manufacturers and wireless carriers.

To date, Staff has conducted 17 investigational hearings of Google executives and employees, including Google co-founder Sergey Brin, former CEO Eric Schmidt, chief economist Hal Varian, and other key executives spanning search, advertising, syndication, and mobile.³

B. EUROPEAN COMMISSION INVESTIGATION

The European Commission ("EC") has been conducting a parallel investigation of Google since November 2010. On May 21, 2012, Commissioner Joaquin Almunia issued Google a letter, signaling the EC's possible intent to issue a Statement of Objections ("SO") against Google for abuse of dominance in violation of Article 102 of the EC Treaty. The letter set out the EC's concern in four areas: (1) Google's "favourable treatment of its own vertical search services as compared to those of its competitors in its natural search results"; (2) Google's "practice of copying third party content" to supplement its own vertical offerings; (3) Google's "exclusivity agreements with publishers for the provision of search advertising intermediation services"; and (4) Google's "restrictions with regard to the portability and cross-platform management of online advertising campaigns."⁴

In his letter, Commissioner Almunia offered Google the opportunity to resolve the concerns prior to the issuance of an SO by coming forward "with a written description of possible solutions" to the EC's concerns.⁵

On June 30, 2012, Google submitted a settlement proposal to the EC. Although Google denied any infringement of European Union ("EU") competition law, Google proposed to enter into several "commitments," designed to address the EC's stated concerns.⁶

FTC staff has coordinated closely with EC staff throughout the course of our parallel investigations. Staff has received waivers from Google, Microsoft, Yahoo!, and a handful of other parties to discuss and exchange information with the EC. Staff has had regular telephone calls with EC staff, where we have updated one another on theories and evidence. We have also exchanged documents of mutual interest.

C. MULTI-STATE INVESTIGATION

Several states, including Texas, New York, California, Ohio, and Oklahoma have also been conducting a joint parallel investigation.⁷ Texas has been investigating Google since approximately June 2010, and is the leader of the multi-state working group. The other states joined the investigation more recently, in the summer of 2011.

FTC staff has been working closely with the states, granting access to FTC documents, as well as conducting joint meetings and interviews of third parties. In addition, Staff has had regular telephone calls with the states, where we have updated the states on our theories, evidence, and investigational plan. We have also exchanged documents of mutual interest. Representatives from the states have attended FTC staff's investigational hearings of Google executives.

The states have not yet reached a conclusion as to whether to pursue litigation against Google.⁸

D. PRIVATE LITIGATION

Several private lawsuits have been brought against Google relating to the conduct at issue in Staff's investigation. All have been dismissed.

The cases can be divided into two categories: those challenging manipulation of Google's search rankings,⁹ and those contesting increases in minimum prices for AdWords search advertising.¹⁰ In both *Kinderstart.com LLC v. Google, Inc.*,¹¹ and *SearchKing, Inc. v. Google Tech., Inc.*,¹² plaintiffs alleged that Google unfairly demoted their websites on Google's search results page, which significantly impacted their businesses. In dismissing the plaintiff's claim, the *SearchKing* court found that Google's rankings were constitutionally protected opinion, and that even malicious manipulation of the rankings would not expose

Google to tort liability.¹³ The *Kinderstart* court also dismissed the plaintiff's complaint, rejecting the claim that Google's search results were an essential facility for vertical websites, because Kinderstart had not been eliminated from the downstream market and continued to get high rankings from other search engines.¹⁴

The AdWords cases address a common fact pattern, but are decided on alternate grounds. Plaintiffs in these cases argued that Google increased the minimum bids for the keywords the website had purchased, which made those keywords effectively unavailable, thus depriving the plaintiff website of traffic. The complaint in *TradeComet.com, LLC v. Google, Inc.*¹⁵ was dismissed for improper venue, while the allegations in *Google, Inc. v. myTriggers.com, Inc.*¹⁶ were dismissed on grounds that they failed to describe harm to competition as a whole. Both cases were dismissed with little discussion of the merits.

In *Person v. Google, Inc.*,¹⁷ Judge Fogel of the Northern District of California criticized the plaintiff's market definition, finding no basis for distinguishing the alleged "search advertising market" from the larger market for Internet advertising.¹⁸ The Ninth Circuit affirmed the conclusion that the plaintiff failed to plead facts sufficient to raise the allegations in its complaint beyond a speculative level, but did not address market definition.¹⁹

II. STATEMENT OF FACTS

A. THE PARTIES

1. Google

Google is an Internet search technology company, founded in 1998 and headquartered in Mountain View, California. Google's products and services include a general "horizontal" search engine, as well as numerous integrated "vertical" websites that focus on specific

content areas, such as product or shopping comparison, maps, finance, books, and video.²⁰ Google also sells search advertising through its AdWords program, as well as search and search advertising syndication services through its AdSense program. Additionally, Google offers computer and software applications, such as Google Toolbar (a graphic user interface that is integrated into a browser and provides direct access to Google's search page from any web page), Gmail (Google's internet mail program) and Chrome (Google's Internet browser). Google also offers the Android operating system for mobile devices, along with a host of applications for those devices. In addition, Google recently completed its purchase of Motorola Mobility, which manufactures, among other things, mobile devices (including Android devices), and now owns a large portfolio of mobile patents.²¹

Google employs more than 32,000 people worldwide,²² and had annual revenues in 2011 of just under \$38 billion.²³

2. General Search Competitors

a. Microsoft

Microsoft introduced its general search engine, MSN, in 1998,²⁴ and rebranded it as Bing in May 2009.²⁵ In 2011, Microsoft filed complaints with the FTC and with the EC, alleging that Google has unlawfully monopolized markets for search and search advertising.²⁶

b. Yahoo!

Like Google and Bing, Yahoo! – founded in 1994 – offers a range of Internet services.²⁷ Since 2010, Yahoo! has maintained a search partnership agreement with Bing.²⁸ Under the agreement, Microsoft powers Yahoo!'s natural search results (through a feed provided to Yahoo!),²⁹ and the parties jointly operate a search advertising network.³⁰

3. Major Vertical Complainants

Staff has met with, interviewed, and subpoenaed numerous vertical websites offering shopping, travel, local, and financial services. We identify here some of the main complainants. In general, these companies complain that Google's practice of preferencing its own vertical results over the complainants' websites on Google's search page has negatively impacted the complainants' ability to compete for users and advertisers.

a. Amazon

Amazon is the world's largest online retailer, and also produces consumer electronics, notably the Amazon Kindle e-book reader and the Kindle Fire tablet. Amazon's product search feature competes with Google Product Search.

b. eBay

eBay operates an online auction and shopping website in which people and businesses buy and sell a broad variety of goods and services worldwide. eBay has expanded from its original "set-time" auction format to include "Buy It Now" standard shopping, and a variety of other services. eBay's product search feature competes with Google Product Search.

c. NexTag

NexTag is a shopping comparison website in the U.S. that competes with Google Product Search.

d. Foundem

Foundem is a shopping comparison website in the United Kingdom that competes with Google Product Search. We understand that Foundem was the first vertical website to publicly accuse Google of preferencing its own vertical content over that of competitors on

Google's search page. Foundem's complaint to the EC, among others, prompted the EC to open its investigation into Google's web search practices.

e. Expedia

Expedia is a travel website in the U.S. that books airline tickets, hotel reservations, car rentals, cruises, vacation packages, various attractions, and related services. Expedia competes with Google's fledgling Google Flight Search property.

f. TripAdvisor

TripAdvisor is a travel website in the U.S. that assists customers in gathering travel information, posting reviews and opinions of travel-related content, and engaging in interactive travel forums. Users provide most of the content, including reviews. TripAdvisor competes with Google Local (formerly Google Places). TripAdvisor has complained that Google has appropriated, or "scraped," its user-generated reviews, placing them on Google's own local property.

g. Yelp

Yelp is a user review and local search website in the U.S. Yelp contains listings for businesses, such as restaurants and shops, among other venues, and – like TripAdvisor – is largely built on user-provided content. Yelp has complained that Google has appropriated, or "scraped," its user-generated reviews, placing them on Google's own local property.

4. Facebook

Facebook is the preeminent U.S. social networking site, founded in 2004, with over 900 million users as of May 2012.³¹ While Facebook does not fit the traditional mold of vertical complainant, it has played a considerable role in shaping Staff's views of the relevant markets and of Google's conduct within those markets. Facebook competes with Google's

recently introduced social networking site, Google Plus. Facebook has complained, among other things, that Google's preferencing of Google Plus results over Facebook results on Google's search page is negatively impacting its ability to compete for users.

B. INDUSTRY BACKGROUND

1. General Search

The Internet is a vast, largely unorganized collection of constantly changing information. If the Internet can be roughly analogized to a huge and highly dynamic library, then algorithmic search engines are the card catalog.

Unlike a traditional library, the Internet is too large and changes too rapidly for traditional cataloging.³² Instead, search engines (like Google) deploy computer programs that constantly "crawl" the web, building and updating automated indexes of web content. Similarly, the process of finding relevant information inside these web indexes is automated. Sophisticated algorithms evaluate the content of the end user's request for information to determine which parts of the web index may contain relevant responses. The identified potential responses are then ranked by additional algorithms based on the predicted likelihood of their relevance, and displayed to the end user in response to his or her query. Critically, all of this complex activity occurs rapidly and automatically, without any direct human intervention.

As users search for information on the Internet, they necessarily provide the search engine with valuable information – the precise topic users are interested in at that moment. Although a user does not pay for the web search service, the user's focused interest – or intent – is very valuable to advertisers, because users are effectively identifying themselves as potential customers through the content of their queries. For example, a business selling

camping equipment can, with the search engine's assistance, advertise just to those users who type the query "new tent" into the search engine. Thus, in a sense, the user is both a consumer of the product *and the product itself*.

Today, there are two broad categories of search engine. A "horizontal" (or general) search engine, such as Google, allows users to enter any text string as a search request, and returns a comprehensive list of search results regardless of topic. By contrast, a "vertical" search engine (sometimes referred to as an "aggregator") focuses on a specific category of content, such as consumer products (*e.g.*, NexTag) or travel (*e.g.*, Expedia), and only accepts and returns results for search queries within that narrow category.³³

Vertical search engines, even in aggregate, are not a complete substitute for horizontal search engines due to the limited pool of information they contain. However, vertical search engines do offer potentially attractive alternatives to advertisers, because visitors to vertical properties routinely express the same kind of focused commercial interest (*e.g.*, "Nikon camera" or "flights to San Diego") that is expressed by users of a horizontal search engine.

Complainants operate competing horizontal (or general) search engines (Bing and Yahoo!), as well as a variety of vertical websites.

2. Online Advertising

Search engines earn revenue from the sale of advertising. Online advertising has emerged as an attractive alternative to traditional advertising formats, such as print and broadcast media.³⁴

Google's "core business" is search advertising (through its AdWords platform).³⁵ Google earned 96 percent of its nearly \$38 billion in revenues last year from the sale of

advertising.³⁶ The growth of the Internet has created entirely new business models that can take advantage of ways, unique to the Internet, to identify and reach potential customers with advertising.³⁷ Among the reasons advertisers have shifted budget online is the high degree of tracking possible and the quantifiable, superior return on investment.³⁸

Online advertising is primarily made up of display and search advertising, although some other types of advertising (*e.g.*, contextual, re-targeted display, and social media advertising) also have some presence. Display advertising typically consists of banner ads containing graphics and other rich media appearing on white space on a web page. Search advertising consists of text ads (displayed on the right-hand side of the search results page, at the top of the page above the search results, and below the search results) matched to specific keyword queries entered into the search engine by the user.

Search advertising makes up the bulk of online advertiser spend, primarily because advertisers believe that search advertising provides unprecedented precision in identifying potential customers, measurability, and the highest return on investment.³⁹ Simply put, “it is the most effective marketing ever.”⁴⁰ Search advertising is highly valued by advertisers because they learn crucial information about the user from the query alone: they learn that the user is interested in a particular subject, *right now*.⁴¹ Thus, search advertising is a highly effective method of reaching users who are interested in learning about or purchasing products. Search advertising is often called “direct response” advertising, as it “is intended to elicit a response from a consumer, such as the purchase of a product or signing up for a service.”⁴²

With pure display advertising, all the advertiser knows about the user is that he or she is viewing a particular web page (similar to the information an advertiser may have about a

television audience, for example), with no information about the user's present intent.

Display ads are not targeted enough to be as effective as search at eliciting direct responses from its audience. Thus, the primary purpose for display advertising is to build brand awareness.⁴³

Online advertising continues to evolve, and new offerings have appeared that do not fit squarely into the traditional search and display categories. Contextual advertising places display ads on web pages containing content relevant to the ad.⁴⁴ For example, a user reading an article about Jamaica in the travel section of the *New York Times* website may see advertisements relating to Jamaica and travel.⁴⁵ Re-targeted (or behavioral) advertising allows an advertiser to target users with display ads based on the user's browsing history.⁴⁶ Social media advertising is another emerging ad platform that allows more focused targeting of ads, in this case based on user interests as identified by the social media platform (e.g., things that a user "likes" in Facebook).⁴⁷ These newer ad products do not account for a significant portion of online advertising, and, today, with the exception of social media advertising, appear to have only limited potential for growth.⁴⁸

3. Syndicated Search and Search Advertising

In addition to providing general search and search advertising services through their own websites, general search engines also "syndicate" their search or search advertising platforms to other websites and website publishers. Thus, when a user goes to a website such as AOL or Ask.com, he or she can run searches on that website through a search box, which is "powered" by a search provider, such as Google (through its AdSense platform).

A number of advantages flow to both the search provider and the website publisher from this arrangement. The publisher keeps the user on its own website rather than watching

the user leave to go to a dedicated search website like Google or Bing; the search provider picks up incremental search volume, as some users will not bother to run a search if they have to leave the publisher's website to do it; and, most importantly, the resulting search traffic can be monetized through search advertising in the same way as a search run on Google or Bing.

The process works very similarly to a web search conducted on Google. Google receives queries from the third-party website, evaluates them against a subset of its web index, and then delivers web search results to the user on the third-party publisher's website.⁴⁹ As with web search on Google.com, the consumer pays for none of these services. Instead, publishers pay Google for syndicated search either on a cost-per-user-query basis (for example, \$.95 per 1,000 queries), or by accepting search advertisements from Google and splitting the revenues from the search advertisements run on the publisher's website. The resulting revenue sharing arrangement is often referred to as the "traffic acquisition cost" (or "TAC").

Publishers are generally able to select the web search and search advertisement syndication services separately or together. Thus, publishers that do not wish to offer web search generally (or Google's web search, specifically) can – and do – participate in Google's AdSense program to receive search advertisements without the corresponding web search functionality.⁵⁰

4. Mobile Search⁵¹

In recent years, the focus of search (and related advertising) has begun shifting from the traditional desktop model to the rapidly emerging – and lucrative – frontier of mobile (or "smartphone") devices. At the forefront of this shift is Google's mobile operating system,

Android,⁵² which has – in a few short years – eclipsed Apple’s iPhone in the number of U.S. smartphone subscribers.⁵³ Smartphones have transformed the way that users interact with their mobile phones and led to a dramatic growth in mobile web usage. As smartphone usage has increased, so has the availability of mobile search and other mobile applications. Moreover, because smartphones are equipped with GPS technology, smartphone usage has created opportunities for advertisers to target users with location-based search ads, which have the ability to target a user’s present intent even more precisely than desktop search ads.

Google and others have undertaken significant efforts to expand their search and search advertising capabilities into the mobile sphere through distribution agreements with mobile device manufacturers and wireless carriers. As a result of such agreements, when a user purchases a mobile device, that device typically comes pre-installed with search functionality, along with a number of other applications.

C. THE SIGNIFICANCE OF SCALE IN INTERNET SEARCH

“Scale” – both user queries and advertising volume – is important to the competitive dynamics of Internet search. Microsoft asserts a need for greater scale on two fronts.

1. Search Query Volume

Microsoft asserts that it requires additional search query volume in order to improve the quality of Bing’s search algorithms. Additional query volume can be used to improve the quality of a search engine’s algorithms in a number of ways: logs of user queries are used to help improve the quality of answers to “tail” – or rarely seen – queries generally,⁵⁴ and to improve specific features of the search engine, such as “instant” search results, “suggestions,” and “spell correct.”⁵⁵ User queries can also be used to identify trends (for example, fresh news stories).⁵⁶

In addition, click data (the website links on which a user actually clicks) is important for evaluating the quality of the search results page. As Google's former chief of search quality Udi Manber testified:

The ranking itself is affected by the click data. If we discover that, for a particular query, hypothetically, 80 percent of people click on Result No. 2 and only 10 percent click on Result No. 1, after a while we figure out, well, probably Result 2 is the one people want. So we'll switch it.⁵⁷

Testimony from Sergey Brin and Eric Schmidt confirms that click data is important for many purposes, including, most importantly, providing "feedback" on whether Google's search algorithms are offering its users high quality results.⁵⁸

Finally, search providers run experiments on large volumes of users. Search engines conduct experiments on everything from ranking of search results to user interface and design decisions.⁵⁹ As Larry Page and Sergey Brin stated in their 2005 annual letter to shareholders:

Our teams are more productive once they get real users and feedback. We have learned that the best way to make something great is to actually launch it to the public. That's why we have the Google Labs and 'beta' labels – these are our experiments.⁶⁰

Multiple experiments are conducted simultaneously.⁶¹ The more search users there are at any given time, the more experiments can be run, the faster they can be completed, and the more improvements that can be made to the search algorithms.⁶² According to Microsoft chief economist (and Harvard professor) Susan Athey, Microsoft's search quality team is greatly hampered by having insufficient search volume to conduct experiments.⁶³

With improved search quality, particularly for "tail" queries, Bing asserts that it will be better positioned to compete with Google for users (and, thus, for advertisers), and so to

constrain the exercise by Google of monopoly power.⁶⁴ In 2009, Google's former head of search quality Udi Manber explained:

The bottom line is this. If Microsoft had the same traffic we have their quality will improve *significantly*, and if we had the same traffic they have, ours will drop significantly. That's a fact.⁶⁵

2. Advertising Volume

Microsoft also asserts that it requires additional advertising volume in order to improve the relevance and quality of the search advertising it serves to users. More advertisements help to improve the relevance and quality of the ads served for several reasons: with greater volume, a search engine has more choices of which ads to serve to users;⁶⁶ there is more coverage of queries (*i.e.*, a larger percentage of queries will actually return search results pages with advertisements);⁶⁷ and – similar to the user feedback loop on search queries – increased user engagement (that is, users clicking on more ads) educates the ad-serving algorithms on what advertisements to serve, how to rank those advertisements, and how to price them.⁶⁸ An increase in quality, and thus click-through rate, typically increases the “conversion rate” of advertisements,⁶⁹ and thus, an advertiser's return on investment (“ROI”), which means that advertisers are more likely to invest, and re-invest, in that advertising platform.⁷⁰

An increased volume of advertisers (and advertisements) on a platform also means increased competitiveness for advertising opportunities and, thus, more revenues for the search engine.⁷¹ This, in turn, means that the search engine can do two things: amortize its costs and re-invest in its own capabilities,⁷² and provide greater advertiser coverage, and thus, revenues (through revenue-sharing agreements) to its syndication partners (website publishers).⁷³ Greater revenues to publishing partners, in turn, attracts additional publishers,

and – importantly – also serves to attract more advertisers, that, generally speaking, prefer their advertisements to reach as broad an audience as possible.⁷⁴

In sum, Bing asserts that a larger volume of advertisements – and the improved coverage, quality, conversion rates, and revenues that come from such an increased volume – will allow it to better compete with Google for both advertisers and website publishers, and so to constrain the exercise by Google of monopoly power.

3. The Scale Curve

Google acknowledges the importance of scale in the abstract. Google documents are replete with references to the “virtuous cycle” among users, advertisers, and publishers;⁷⁵ and testimony from Google executives confirms the continuing viability of the “cycle.”⁷⁶ However, Google argues that, while scale matters, it only matters up to a point, beyond which there are substantially “diminishing returns” to increasing volumes of both queries and advertisements.⁷⁷ For example, Sergey Brin testified that a “rough rule of thumb” might be, as query volume doubles, a search engine might expect to see a one percent increase in quality.⁷⁸

Google argues that Bing’s query and advertiser volume have passed the point at which scale should – or would – matter significantly to Microsoft, and that any volume gains made by Bing would yield minimal improvements in either Bing’s search quality or its monetization ability.⁷⁹ Microsoft does not dispute the notion that there are generally diminishing returns to scale.⁸⁰ The main bone of contention between Google and Microsoft is *where on this scale curve* Microsoft currently operates. This is an important question, but one which evades easy answers. This is, in part, because neither party can identify a fixed number of queries or ads that constitutes the “minimum efficient” point of operation.

As the Internet grows,⁸¹ and as both Google and Bing increase in size, the *relative* scale gap may matter more than either party's absolute size. Microsoft chief economist Susan Athey notes that, where firms compete on the basis of quality, with increased scale returning dividends – not just in user engagement, but also in ad dollars, monetization, and publisher participation, all feeding back into user engagement (recall “the virtuous cycle”) – the relative gap in quality and monetization matters far more than any minimum volume threshold.⁸² In short, Athey asserts: “the fact that Bing’s scale is similar to Google’s five or six years ago does not alleviate the challenge faced by Bing in competing with Google at this moment in time.”⁸³

Neither party can provide a precise quantification of the issue.⁸⁴ However, Microsoft asserts that even a 5 to 10 percent increase in query traffic would be “very meaningful” to Microsoft because Bing is at the lower part of the scale curve where “each percentage point is critical.”⁸⁵ Microsoft notes that, in 2010, when it gained access to Yahoo!’s query and advertising volume, Bing made significant gains in both search quality and monetization.⁸⁶ For example, the influx of data from Yahoo! significantly improved Bing’s “auto suggest” feature. From July 2010 (immediately preceding access to Yahoo!’s query volume) to September 2011 (following the incorporation of Yahoo!’s query volume), click rates for Bing’s “auto suggest” feature increased from 44 percent to 61 percent, according to Susan Athey, “directly due to the addition of Yahoo! data into Bing’s algorithms.”⁸⁷ Microsoft also claims that its search quality has improved as a result of the significant increase in the number of experiments Bing can run over Yahoo!’s user volume.⁸⁸

In addition, Microsoft asserts that, in modeling the economic benefits it expected to receive from the addition of Yahoo!’s advertising volume into Microsoft’s AdCenter

platform, it calculated that Bing would receive a 20 percent boost in revenue per search (“RPS”) on the basis of Yahoo!’s additional volume.⁸⁹ Although Bing’s RPS (and consequently, RPM) has improved with the addition of Yahoo! query and ads volume, it has not improved as substantially as Microsoft initially forecast.⁹⁰

In this investigation, the question of how and why scale matters has taken a prominent position in several allegations advanced by complainants: specifically, whether the conduct under review denies Google’s main competitor – Microsoft – the scale it needs to successfully constrain Google’s monopoly over search and search advertising. These allegations are discussed in detail in the following section.

D. GOOGLE’S SUSPECT CONDUCT

Staff has conducted a comprehensive investigation into several areas of alleged anticompetitive conduct. Below, we lay out four of the five main areas of Staff’s investigation.⁹¹

1. Google’s Preferencing of Google Vertical Properties Within Its Search Engine Results Page (“SERP”)

Staff has investigated whether Google is unlawfully preferencing its own vertical properties, while demoting rival vertical properties, in order to maintain, preserve, or enhance Google’s monopoly power in the markets for search and search advertising. Complainants allege that Google’s conduct is anticompetitive because it forecloses alternative search platforms that might operate to constrain Google’s dominance in search and search advertising. Although it is a close call, we do not recommend that the Commission issue a complaint against Google for this conduct.

a. Overview of Changes to Google's SERP

Google makes frequent changes to both the user interface and the algorithms which control the content of its SERP. Some changes, such as changes that purportedly remove spam, are implemented unilaterally, with no user testing.⁹² Other changes are implemented through a launch review process, which typically includes: (1) internal testing by Google engineers (in what Google has termed the “sandbox”);⁹³ (2) side-by-side (“SxS”) testing by external raters, who compare the existing set of results with the proposed set of results for some sample set queries;⁹⁴ (3) testing on a small percent (between 1 and 2 percent) of live traffic;⁹⁵ and (4) the preparation of a “launch report” for presentation to the Launch Committee. Once the launch report is presented to the Launch Committee, the proposed change is approved, rejected, or sent back to engineers for modification.⁹⁶

In 2010, Google claims to have conducted 10,000 “sandbox” tests, 8,000 SxS comparison tests, and 2,500 “live” click tests. Of the changes proposed and tested, approximately 500 algorithm changes were launched.⁹⁷ Google’s stated goal is to make its ranking algorithms better in order to provide the user with the best experience possible.⁹⁸

b. Google’s Development and Introduction of Vertical Properties

Google launched its various vertical properties in stages, dating back to approximately 2001, with the introductions of Google News, Froogle (shopping), Image Search, and Groups.⁹⁹ For each vertical property, Google maintains separate indexes (also known as databases or corpora), in which it stores specific types of data.¹⁰⁰

Beginning around 2005, Google recognized that vertical search engines (*i.e.*, “aggregators”) in certain highly commercial categories posed a nascent “threat” to its dominance in general web search. Google feared that these websites offered users better

search capabilities within specific commercial categories, and thus might cause users to shift their searches in those categories away from Google's general web search platform. As users moved to vertical search websites, those websites could, in turn, become more attractive vehicles for advertisers, thus resulting in potentially significant revenue losses to Google. In short:

Vertical search is of tremendous strategic importance to Google. Otherwise the risk is that Google is the go-to place for finding information only in the cases where there is sufficiently low monetization potential that no niche vertical search competitor has filled the space with a better alternative.¹⁰¹

A 2008 presentation, entitled "Online Advertising Challenges: Rise of the Aggregators," further highlights the problems faced by Google with regard to the leading UK-based finance vertical website, MoneySupermarket:

Issue 1. Consumers migrating to MoneySupermarket. Driver: General search engines not solving consumer queries as well as specialized vertical search. . . . Consequence: Increasing proportion of visitors going directly to MoneySupermarket. . . . Google Implication: Loss of query volumes.

Issue 2: MoneySupermarket has better advertiser proposition. Driver: MoneySupermarket offers cheaper, lower risk (CPA-based) leads to advertisers. Google Implication: Advertiser pull: Direct advertisers switch spend to MoneySupermarket/other channels.¹⁰²

Partly in response to this new competitive threat – the "rise of aggregators" – Google decided to hone in on certain "key" vertical search areas (shopping, local, finance, and travel) and invest in developing existing – or creating new – vertical properties.¹⁰³ In certain areas where Google already had existing vertical properties, such as shopping and local,¹⁰⁴ Google saw a critical need to invest further and take measures to increase user traffic to those properties.¹⁰⁵ In potentially lucrative areas where strong verticals already existed and where

Google had no offering – such as mortgages, offers, hotel search, and flight search – Google introduced new vertical properties.¹⁰⁶

c. The Evolution of Display of Google's Vertical Properties on the SERP

Initially, Google provided tabs at the top of its website to permit users to search within each of its verticals. In 2003, then-director of consumer web products Marissa Mayer¹⁰⁷ began to develop a new user interface called “Universal Search” to expose the content in these corpora to users directly on Google’s SERP.¹⁰⁸ As she wrote at the time:

Universal Search is an effort to redesign the user interface of the main Google.com results page so that Google deliver[s] the most relevant information to the user on Google.com, no matter what corpus that information comes from. This design is motivated by the fact that very few users are motivated to click on our tabs, so they often miss relevant results in the other corpora.¹⁰⁹

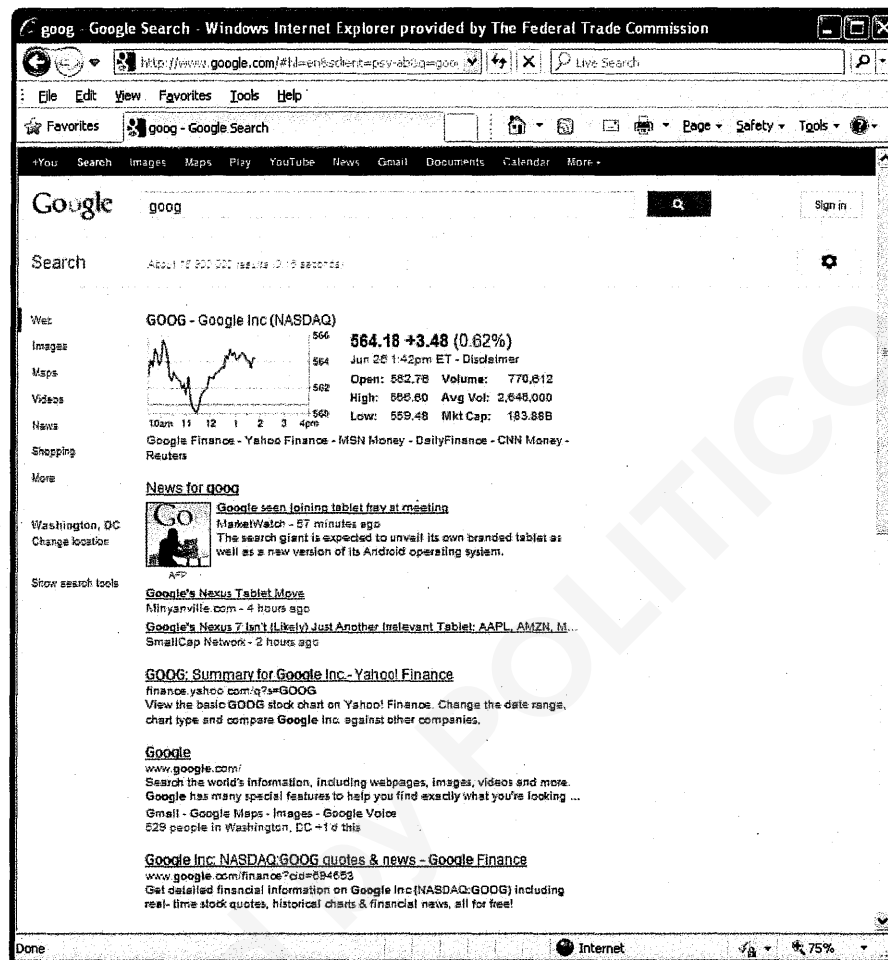
While the idea of “Universal Search” was proposed in 2003, Google did not launch Universal Search until 2007. In the interim, Google relied on “OneBoxes,” which incorporated vertical content directly into Google’s SERP via actual boxes that were set above the natural search results. If Google determined that a user query related to content from one or more of its vertical indices, Google sent the query to its indices, returned any relevant results, and displayed those results in OneBoxes on the SERP above any web links.¹¹⁰

Google ultimately redesigned and launched its Universal Search results in May 2007.¹¹¹ As part of the redesign, Google began sending queries to all Google indices to determine whether any of them had relevant results.¹¹² Google then combined all of the results – from both its vertical indices and its general web search results – onto the SERP.¹¹³ However, Google faced problems in ranking the Universal Search results against each other

and against its natural search results, because the web index and other indices all had their own ranking algorithms and scores.¹¹⁴ Google referred to the difficulty of comparing these ranking scores as an “apples to oranges” problem.¹¹⁵ Google did, however, frequently compare the quality of its vertical results to that of its competitors using other scoring methods.¹¹⁶

The verticals were initially placed in one of three locations: if Google deemed the vertical content to be highly relevant, it would go into position one, above the natural search results; if Google deemed the content somewhat relevant, it would go into position four (or midway down the first page of natural search results); and if Google deemed the content only marginally relevant, it would go into position 10 (or at the bottom of the first page of natural search results).¹¹⁷ In 2012, Google claims that it changed its algorithms to display Universal Search results in any position on the SERP, depending on the same initial relevancy screen.¹¹⁸

A screen shot showing an example of a Universal Search result is provided on the next page.



In responding to the user query “GOOG,” the SERP first displays a Universal Search result for Google’s stock, including stock information and links to sites with finance information, listing Google Finance first. Below that, the SERP displays a Google News Universal Search result, with links to three articles. Next, Google includes its natural search results, *i.e.*, a listing of links to websites ranked in order of relevance, as determined by Google’s search algorithms.

d. Google’s Preferential Display of Google Vertical Properties on the SERP

Google utilized its control over the Google SERP both to improve user experience for searches and to maximize the benefit to its own vertical properties. *First*, Google sought to

maximize the percentage of queries for which it displayed Universal Search results.¹¹⁹

Evidence shows that Google sought to increase such “triggering” of Universal Search results not only to provide users with the “right” answer to their queries, but also to drive traffic to Google properties.¹²⁰ Google recognized that the frequent display of its vertical properties on the SERP was necessary to drive traffic to its properties, and thus, grow user share in highly commercial areas such as shopping and local.¹²¹ Google continued to trigger Universal Search results frequently – and prominently – even when it determined that showing such results in the top position would “cannibalize” revenue from the top ads, as the company was willing to lose short-term revenue with the long-term goal of retaining and growing vertical search query share.¹²²

Second, Google embellished its Universal Search results with photos and other eye-catching interfaces, recognizing that these design choices would help steer users to Google’s vertical properties.¹²³ Third party studies show the substantial difference in traffic with prominent, graphical user interfaces.¹²⁴ These “rich” user interfaces are not available to competing vertical websites.¹²⁵ Moreover, Google’s Universal Search results often were not labeled as being provided by Google affiliated services, but were integrated directly into the search results.

Third, Google displayed its Universal Search results at or near the top of the SERP.¹²⁶ This desirable positioning of Google’s Universal Search results pushes all other web search results down, which significantly decreases click-through to the websites displayed in Google’s natural search results.¹²⁷ Google displays its Universal Search results in these prominent positions without comparing the quality of Google’s vertical content to that of its vertical competitors,¹²⁸ or evaluating whether users would prefer to see Google’s content or

the displaced web search results. Vertical search competitors have alleged numerous ways in which their content is superior to Google's verticals.¹²⁹

Preliminary analysis of click-through data collected by eBay indicates that, over the three-month period of January-April 2012, when Google Product Search was displayed on Google's SERP, it appeared in one of the top five positions 64 percent of the time.¹³⁰

Notably, eBay's data shows that, for queries that returned Google Product Search at *any* position on the page, Google Product Search received a lower percentage of clicks compared to the web search result shown in the same position.¹³¹ For example, when an eBay result appeared in the first position in response to a shopping query, users clicked on that result 38 percent of the time. Conversely, when Google Product Search appeared in the first position in response to a shopping query, users clicked on Google Product Search only 21 percent of the time. The full results of the eBay study are set forth below:¹³²

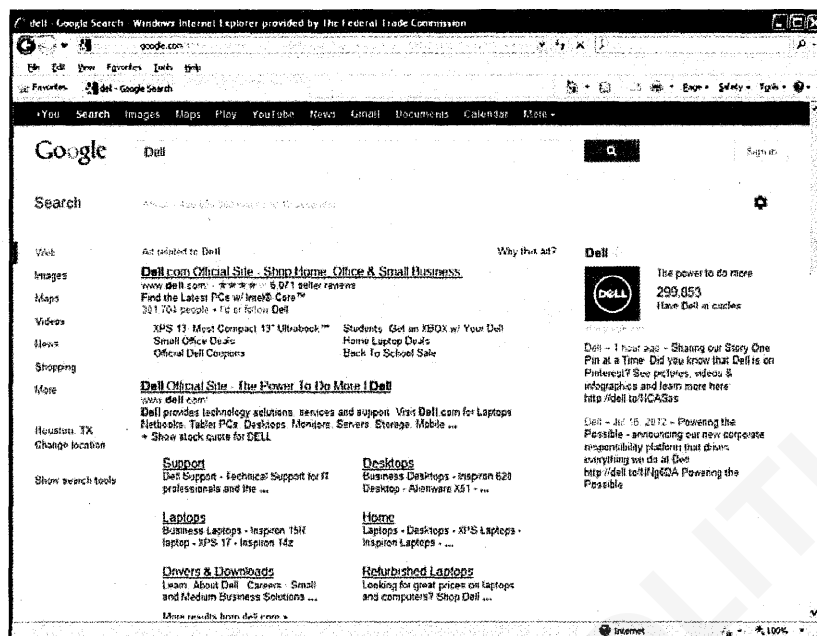
Rank (position of natural search results) Note: Excludes paid search results whether top, bottom, or side	Natural Search Result (other than Google Shopping or eBay)	Google Shopping	eBay
1	38%	21%	31%
2	21%	14%	20%
3	16%	12%	18%
4	13%	9%	11%
5	10%	8%	10%
6	8%	6%	9%
7	7%	5%	9%
8	6%	2%	7%
9	6%	3%	6%
10	5%	2%	6%
11	5%	2%	5%
12	3%	1%	4%

This study – albeit limited in time and application – suggests that, at every position, users actually prefer web search results to Google Product Search for their shopping queries.¹³³

Although Google tracks user click-through rates (and relies on such click-through data to improve its web search results in a number of ways, *see supra* p. 14), Google has not relied on click-through data to rank its Universal Search results against other web search results.¹³⁴ According to Marissa Mayer, Google did not use click-through rates to determine the position of the Universal Search properties because it would take too long to move up on the SERP on the basis of user click-through rate.¹³⁵

Rather than comparing its content with that of competitors, Google used the occurrence of competing vertical websites in its natural search results to automatically boost the ranking of its own vertical properties above that of competitors.¹³⁶ For example, where Google's algorithms deemed a comparison shopping website relevant to a user's query, Google automatically returned Google Product Search – above any rival comparison shopping websites.¹³⁷ Similarly, when Google's algorithms deemed local websites, such as Yelp or CitySearch, relevant to a user's query, Google automatically returned Google Local at the top of the SERP.¹³⁸

Google also dedicates space at the top of its SERP to its social network vertical, Google Plus. Google provides links to Google Plus pages that might be relevant to a query on the right-hand side of the SERP, and “auto suggests” Google Plus pages for user queries, regardless of which social media sites are the most relevant, comprehensive, or have the freshest results in response to any given user query.¹³⁹ Google also displays prominent links to Google Plus pages when users make navigational queries to many companies' websites. For example, in response to the navigational query “Dell” a user is presented with the SERP shown on the next page.



The SERP shows a block of links to sites within Dell.com (called a “megasitelink”) at the top of the natural search results.¹⁴⁰ In addition, the entire right hand column contains a link to Dell’s Google Plus page with a prominent “Dell” logo.¹⁴¹ Google displays no content or links to Dell’s other social media content (such as Facebook or Twitter) that might be more relevant to the query in this prominent space, and, in combination with the megasitelink, any natural search links to those websites are pushed below the fold.¹⁴²

Most recently, in May 2012, Google converted all of its “Google Places” pages (now Google Local) to Google Plus pages, creating Google Plus pages for every business in its local results. All of Google’s local Universal Search results now link to businesses’ Google Plus pages. In order to write reviews or read full reviews on Google Local, users must open Google Plus accounts.

Fourth, Google launched commission-based vertical properties – mortgage search, flight search, and offers¹⁴³ – in ad space on Google’s SERP that it reserved exclusively for its own properties. Google labeled these ads as “Comparison Ads” (mortgages),¹⁴⁴ “Ads”

(offers),¹⁴⁵ or “Sponsored” (the new paid Google Shopping ads),¹⁴⁶ and other times provided no label (flight search).¹⁴⁷ In May 2012, Google announced that its shopping property, Google Product Search – which will now be known as Google Shopping – will be transitioned to a paid listing model in the fall of 2012.¹⁴⁸ Under the paid model, merchants will pay Google directly to appear in Google Shopping, and Google will no longer include product listings for merchants who do not pay for placement.¹⁴⁹

Google’s dedicated ads do not compete with other ads through Google’s AdWords auction for placement on Google’s SERP. Instead, they enjoy automatic placement in the most effective advertising places on the SERP, usually above the natural search results.¹⁵⁰ Google also does not compare the quality of its own ads to the quality of competitors’ ads that provide the same vertical service. For example, although it displays its flight search above any natural search results for flight-booking sites, Google does not provide the most flight options for travelers.¹⁵¹ As with Google’s Universal Search results, Google’s rich user interfaces for its ads-based vertical offerings, which are unavailable to competitors, lead to higher clicks for Google’s ads.¹⁵²

e. Google’s Demotion of Competing Vertical Websites

While Google embarked on a multi-year strategy of developing and showcasing its own vertical properties, Google simultaneously adopted a strategy of demoting, or refusing to display, links to certain vertical websites in highly commercial categories. According to Google, the company has targeted for demotion vertical websites that have “little or no original content,” or that contain “duplicative” content.¹⁵³

Similarly, Google has identified comparison shopping websites as undesirable to users, and has developed several algorithms to demote these websites on its SERP. Through

an algorithm launched in 2007, Google demoted all comparison shopping websites beyond the first two on its SERP.¹⁵⁴ And, in 2011, Google's heavily-publicized "Panda" algorithm, purportedly aimed at eliminating "low quality" sites,¹⁵⁵ demoted a large number of competing vertical websites, including – once again – comparison shopping websites. This algorithm had the effect of undoing the 2007 algorithm, no longer automatically "saving" the two highest-ranked comparison shopping websites. Instead, Google manually selected websites that would be "whitelisted" out of the demotion. Comparison shopping websites that had been previously returned (under the "two most popular" calculation) could now be demoted off of the SERP, while less high-ranking sites that had been previously demoted might now be "whitelisted" by Google and appear more highly ranked.¹⁵⁶

Google's own vertical properties (inserted into Google's SERP via Universal Search) have not been subject to the same demotion algorithms, even though they might otherwise meet the criteria for demotion.¹⁵⁷ Google has acknowledged that its vertical websites provide auto-generated "aggregations" of web search information without offering any original content,¹⁵⁸ and that they are – essentially – "search results within search results,"¹⁵⁹ exactly the kind of websites Google's search quality algorithms seek to demote.¹⁶⁰ Indeed, Google's web spam team refused to add Froogle search result pages (*i.e.*, those pages listing products responsive to a query) in Google's web index because "[o]ur algorithms specifically look for pages like these to either demote or remove from the index."¹⁶¹ The same team also refused to index Google's local property.¹⁶²

Generally, Google creates very little original content for its vertical properties, essentially copying, or "scraping," its content from other sites. Google has launched several

algorithms that demote sites that “scrape a large percentage of their content from other sites.”¹⁶³ These algorithms are not applied to Google vertical sites.

Google’s vertical properties would rank poorly if they were crawled and indexed by Google because they have never been “engineered” for ranking by the search engine.¹⁶⁴ Unlike Google’s vertical competitors, who expend considerable resources on optimizing their websites in order to rank highly on Google’s SERP, Google does not expend the time and resources to optimize its own vertical properties; it simply places them on the SERP.

f. Effects of Google’s SERP Changes on Vertical Rivals

Vertical websites, such as comparison shopping and local websites, are heavily dependent on Google’s web search results to reach users.¹⁶⁵ Thus, Google is in the unique position of being able to “make or break any web-based business.”¹⁶⁶

Google’s prominent placement and display of its Universal Search properties, combined with the demotion of certain vertical competitors in Google’s natural search results, has resulted in significant loss of traffic to many competing vertical websites. Data from various comparison shopping and other competing websites shows drops in traffic that correlate to changes implemented by Google to its SERP.¹⁶⁷ Google’s internal data confirms the impact, showing that Google anticipated significant traffic loss to certain categories of vertical websites when it implemented many of the algorithmic changes described above.¹⁶⁸

While Google’s changes to its SERP led to a significant decrease in traffic for the websites of many vertical competitors, Google’s prominent showcasing of its vertical properties led to gains in user share for its own properties.¹⁶⁹ For example, Google’s inclusion of Google Product Search as a Universal Search result took Google Product Search from a rank of seventh in page views in July 2007 to the number one rank by July 2008.¹⁷⁰

Google product search leadership acknowledged that “[t]he majority of that growth has been driven through product search universal.”¹⁷¹ By June 2010, 85 percent of the traffic to Google Product Search was clicked through from the Product Universal.¹⁷²

Beyond the direct impact on traffic to Google and its rivals, Google’s changes to its SERP have led to reduced investment and innovation in vertical search markets. For example, as a result of the rise of Google Product Search (and simultaneous fall of rival comparison shopping websites), NexTag has taken steps to reduce its investment in this area.¹⁷³ Google’s more recent launch of its flight search product has also caused NexTag to cease development of an “innovative and competitive travel service.”¹⁷⁴

2. Google’s “Scraping” of Rivals’ Vertical Content

Staff has investigated whether Google has “scraped” – or appropriated – the content of rival vertical websites in order improve its own vertical properties so as to maintain, preserve, or enhance Google’s monopoly power in the markets for search and search advertising.¹⁷⁵ We recommend that the Commission issue a complaint against Google for this conduct.

As Google developed its own vertical properties, in addition to displaying them prominently on its SERP, Google also began “scraping” content – that is, reproducing content without permission – from already-popular vertical websites (*e.g.*, Yelp and TripAdvisor in local; Amazon in products) in order to improve its own vertical offerings.¹⁷⁶ Google recognized that, when first launching certain vertical properties, it could compete most effectively by using product information, rankings, locations, and user reviews from vertical competitors.¹⁷⁷

Google considered several options for obtaining information for display on its own vertical properties: developing its own content; obtaining licenses from other content creators; and obtaining content by crawling the world wide web (in the same way that Google crawls the world wide web for its general web index). Ultimately, Google settled on a combination of all three of these alternatives.

Much of Google's vertical content is currently obtained through feeds from various websites, pursuant to free licenses from those sites for Google to use that data. Google's standard license agreement allows Google to use third parties' data feeds for any purpose.¹⁷⁸ Many website publishers, such as Shopzilla, have agreed to these terms because they believe they do not have the leverage to negotiate with Google regarding the terms of their licenses, because they want the benefits of appearing in Google's vertical.¹⁷⁹

In addition to the feeds it receives, Google's use of crawled content is pervasive. Indeed, the content of any website that Google crawls for indexing purposes (for Google's web search) may be used by Google for any of its vertical search properties in a number of different ways. For example, Google has often included "snippets" (or excerpts) of user reviews from local or shopping properties on its own vertical properties. Google also uses the rankings of various businesses or products to aid its own determination regarding the order in which those businesses or products should be ranked within its own vertical properties. For example, Google calculates the popularity of a product for the purpose of ranking it in Google Product Search based on three factors: (1) Amazon Sales Rank; (2) the number of merchants offering the product for sale; and (3) the quality of those merchants.¹⁸⁰ Because Amazon did not provide competitively sensitive information such as Amazon Sales

Rank to Google through its product feeds, Google obtained the information from its crawls of Amazon's website.¹⁸¹

As discussed earlier, many vertical websites are heavily dependent on Google for their user traffic, and therefore must allow Google to "crawl" their content.¹⁸² Most websites approve of Google's use of their content in Google's vertical properties because it leads to increased traffic to their websites.¹⁸³ Google does not provide web publishers with any assurances regarding the ways in which it makes use of their data.¹⁸⁴

However, several third-party content providers have complained about Google's use of their content to build competing vertical properties that seek to displace the very websites Google has relied upon to build its properties. Google's "scraping" of rival content in order to create and improve its own vertical offerings has come to the forefront in two main areas: local and shopping.

a. The "Local" Story

Some local information providers, such as Yelp, TripAdvisor, and CitySearch, disapprove of the ways in which Google has made use of their content.¹⁸⁵ Google uses third-party local content in three distinct areas: (i) in its natural search results in response to user queries, where links to third parties are returned; (ii) in its "local merge" interface, or the Universal Search interface that is located on Google's main SERP (generally above the natural search results), which includes "snippet" references to user reviews and other content; and (iii) in its separate local property (Google Local), *i.e.*, the web page users are taken to when they click on Google's Universal Search interface (and are taken to a separate web page).

For Google Local, Google needed photos, addresses, hours, and reviews. Google originally obtained this content through licenses with these websites. In late 2006, Google decided that it wanted more control over its local content.¹⁸⁶ Google recognized that review content, in particular, was “critical to winning in local search,” but that Google had an “unhealthy dependency” on Yelp for much of its review content.¹⁸⁷ Google feared that its heavy reliance on Yelp content, along with Yelp’s success in certain categories and geographies, could lead Yelp and other local information websites to siphon users’ local queries away from Google.¹⁸⁸

In order to acquire direct access to a large storehouse of user content, managers working on Google Local attempted to convince Google executives to purchase Yelp, but they were rebuffed.¹⁸⁹ Instead, Google decided to launch a redesigned version of Google Maps, in which users could submit reviews directly to Google.¹⁹⁰

Google understood that the existence of a critical mass of user reviews (like those users had already submitted to websites like Yelp and Trip Advisor) was important in attracting additional user reviews.¹⁹¹ Google also knew that its partners – such as Yelp and Trip Advisor – would be unhappy about Google’s use of their content to collect Google’s own content.¹⁹² Indeed, upon learning of Google’s intent to collect its own reviews and to develop this now-directly competing property, Yelp discontinued its data feed to Google, and asked Google to remove all Yelp content that Google featured on Google Local.¹⁹³

Initially, Google agreed to remove – and did remove – Yelp’s content. However, after offering its own review site for more than two years, Google recognized that it had failed to develop a community of users – and thus, the critical mass of user reviews – that it needed to sustain its local product.¹⁹⁴ In an attempt to gain quick access to a large storehouse

of original content, and after unsuccessfully attempting to purchase Yelp,¹⁹⁵ Google changed its tactic.¹⁹⁶

In April 2010, Google introduced Google Places results on its SERP.¹⁹⁷ The listing for each business that came up as a search result linked the user directly to Google's Places page, with a label indicating that hundreds of reviews for the business were available on the Places page (but with no links to the actual sources of those reviews).¹⁹⁸ On the Places Page itself, Google provided an entire paragraph of each copied review (although not the complete review), followed by a link to the source of the review, such as Yelp (which it crawled for reviews) and TripAdvisor (which was providing a feed).

In July 2010, Yelp noticed what Google was doing – specifically, that Google had again begun featuring Yelp's crawled reviews in its local product, and that it was also including the number of Yelp reviews in Google's overall review count. Google was now featuring Yelp's content without a license – or, indeed, any form of permission – from Yelp. Yelp immediately protested Google's use of Yelp reviews on this now clearly-competing website.¹⁹⁹

Around the same time, TripAdvisor also became concerned that Google's new local property was attempting to drive traffic to itself as a “destination site,” rather than to TripAdvisor and the partners that actually supplied Google with all of its “original” content.²⁰⁰ When TripAdvisor's license came up for renewal, TripAdvisor chose not to renew its license with Google.²⁰¹ TripAdvisor did, however, continue to provide a feed to Google as it sought an amicable resolution to the situation.²⁰²

After much internal discussion, Google implemented a new policy that essentially gave rival local websites – such as Yelp and TripAdvisor – a choice: allow their content to be

included in Google Places or not have their property appear in Google web search results at all.²⁰³ Critically, for Google, this meant that it could now force local websites – that needed access to Google’s web search to reach users – to accede to Google’s use of the large storehouse of reviews that Google’s rivals had built in order to develop its own user base.²⁰⁴

Indeed, Google almost simultaneously launched a new reviews-collection product – Hotpot – to (again) try to solicit original user reviews, this time seeding it with reviews from third-party websites with no attribution.²⁰⁵ Yelp, TripAdvisor, and CitySearch all complained to Google.²⁰⁶ All of these parties sought removal of their user review content from Google Places/Hotpot, as well as the removal of their reviews from Google’s aggregated review count on the main SERP.²⁰⁷ This time, however, Google told each company that if Yelp, TripAdvisor, and CitySearch wanted to have their content removed from Google Places/Hotpot, they would have to exclude their websites from being crawled by Google altogether, which meant complete exclusion from Google’s SERP.²⁰⁸ This was not technically necessary – it was just a policy decision by Google.²⁰⁹

Like many other vertical websites, Yelp, TripAdvisor, and Citysearch relied heavily on Google’s web search results to reach users, and thus could not risk removal from Google’s web search index.²¹⁰ Instead, they each attempted to negotiate with Google, seeking removal from Google Local (without simultaneous removal from Google’s web search results), or at least a user interface that provided sufficient attribution of their content.²¹¹

Facing what seemed to be an all-or-nothing choice, Yelp also began widely publicizing Google’s refusal to remove Yelp content from Google Local (including filing a complaint with the Commission), and ultimately, in July 2011, sent Google a Cease and Desist letter.²¹² In its letter, Yelp clearly indicated that it expected to remain in Google web

search results, including the “local merge” Universal Search interface on the main SERP.²¹³ After receiving the letter (and while under investigation in both the U.S. and E.U.), then-Google executive Marissa Mayer responded to Yelp on July 21, 2011, stating that Google would partly accommodate the request by removing Yelp content from the Google Places pages, but that Google was also going to remove the content from the “local merge” interface on the SERP.²¹⁴

Although it previously claimed it was technically infeasible, Google did eventually agree to retain Yelp results in its web search results.²¹⁵ However, Google continued to maintain that it was not technically feasible to remove Yelp content from Google Places, while leaving Yelp in the “local merge” interface on Google’s main SERP.²¹⁶ Staff believes that this assertion is false, as Google maintains numerous “blacklists” that keep content within Google’s search index, and merely prevent the content from appearing in specific locations, such as Google Product Search.²¹⁷ Mayer later admitted during her investigational hearing that Yelp’s request was in fact technically feasible, but that Google feared that, by allowing websites to “opt out” of Google Places while remaining in the “local merge” on the main SERP, Google might open itself to liability by accidentally including a website that opted out.²¹⁸ Yelp contends that Google’s continued refusal to link to Yelp on Google’s “local merge” interface on the main SERP is simply retaliation for Yelp seeking removal from Google Places.

Publicly, Google framed its changes to Google Local as a redesign to move toward the provision of more original content, and thereby, to remove all third-party content and review counts from Google Local, as well as from the prominent “local merge” Universal Search interface on the main SERP.²¹⁹ But the more likely explanation is that, by July 2011,

Google had already collected sufficient reviews by bootstrapping its review collection on the display of other websites' reviews. It no longer needed to display third-party reviews, particularly while under investigation for this precise conduct.

b. The "Shopping" Story

Much of Google Product Search content is obtained through feeds from various websites with corresponding license agreements, from crawls, and to a lesser extent, by generating its own content.²²⁰ As Google sought to develop a stronger shopping offering beginning around 2006, Google recognized the need to improve its data in several areas.

Google decided to supplement its feeds with additional merchant reviews, product reviews, and product listings it could get from crawls, particularly from Amazon.²²¹ Amazon had a license agreement with Google starting in June 2009. Pursuant to this agreement, Amazon provided Google with only a limited data feed of information about its products, and sought to limit how Google used the data, because Amazon has always feared that Google would use Amazon's comprehensive product catalogue and original review content to develop a strong competitor in shopping.²²²

Shortly thereafter, claiming that Amazon's data feed to Google Product Shopping was too limited, Google decided not to rely on the feed, but instead, crawled Amazon's website to scrape the much more detailed product information – including star ratings and user reviews.²²³ Google also relied on Amazon's web pages that indicate the ranking of products within Amazon. Google used – and continues to use – this information to determine the order in which to rank products within Google Product Search.

In August 2010, around the same time that Yelp requested that Google remove Yelp's content from Google Local, Amazon requested that Google stop using Amazon's crawled

product reviews in Google Product Search.²²⁴ Amazon gave Google a one-week deadline to remove its ratings and reviews from Google Product Search.²²⁵ Google complied with respect to product reviews,²²⁶ and has not used Amazon reviews since. Google refused, however, to cease crawling and using Amazon's star ratings and aggregating that information into Google's average product ratings, and continues to do so.²²⁷

Amazon has asked Google repeatedly to remove its product data from Google Product Search and its companion mobile products, Google Shopping for Mobile and Google Shopper. Google has told Amazon that, due to technical barriers, Amazon's content can only be removed from Google Product Search and the related mobile applications if Amazon is no longer crawled for natural search results.²²⁸ Therefore, Google continues to scrape Amazon product listings for use in Google Product Search and the companion mobile products.²²⁹ Amazon has attempted to negotiate the removal of its content in exchange for a limited data feed, but Google has, thus far, refused to agree to this solution.²³⁰

In addition, Google uses its crawl of Amazon to create its comprehensive product taxonomy for classification of all products. A product taxonomy is an organization of products that allows a computer database to understand the nature of each product. For example, for the system to recognize the name "Harry Potter" as both a book and a movie, each type of product must be classified separately. With millions of different types of products, a product taxonomy allows the system to understand all the types of products and to easily add new products.

Google had various options for obtaining such a classification: purchasing one, paying to generate one, or copying a classification from another website. Google attempted to purchase classifications, but the available classifications were not sufficiently

comprehensive.²³¹ Google also attempted to pay a company to generate a new hierarchy, but this was taking a long time, and also was not sufficiently comprehensive.²³²

Ultimately, Google decided to crawl Amazon's product web pages, read embedded information on Amazon's pages indicating Amazon's classification system, and to use that information to create Google's classification.²³³ This was critical to Google because Froogle had failed partly due to Google's inability to accurately classify the millions of products from feeds and crawls, and to return correct search results.²³⁴ Amazon considers its classification system an important competitive advantage that it spends tremendous resources to develop, and does not approve of Google's use of Amazon's system to develop its own.²³⁵

With Google's migration to a paid shopping model,²³⁶ Google has stated that it will only use reviews from companies that provide licensed feeds of their content. It appears, however, that Google may continue to crawl, and rely upon, rivals' product classifications to generate its own, and on rivals' rankings to determine rankings of products within Google Shopping.

c. Effects of Google's "Scraping" on Vertical Rivals

Because Google scraped content from these vertical websites over an extended period of time, it is difficult to point to declines in traffic that are specifically attributable to Google's conduct. However, the natural and probable effect of Google's conduct is to diminish the incentives of companies like Yelp, TripAdvisor, CitySearch, and Amazon to invest in, and to develop, new and innovative content, as the companies cannot fully capture the benefits of their innovations.²³⁷

3. Google's API Restrictions

Staff has investigated whether Google's restrictions on the automated cross-management of advertising campaigns has unlawfully contributed to the maintenance, preservation, or enhancement of Google's monopoly power in the markets for search and search advertising. Microsoft alleges that these restrictions are anticompetitive because they prevent Google's competitors from achieving efficient scale in search and search advertising.²³⁸ We recommend that the Commission issue a complaint against Google for this conduct.

a. Overview of the AdWords Platform

In order to set up a Google AdWords campaign, advertisers prepare extensive bids, consisting of thousands – even hundreds of thousands – of keywords. For example, DirecTV might bid on common keywords such as “television,” “TV,” and “satellite,” along with specific television show names, such as “Friday Night Lights,” and common misspellings of these words or related phrases. The advertisers' bids can be calibrated by time and location (*i.e.*, DirecTV could seek to focus its “Friday Night Lights” campaign to Friday nights in Texas during football season), and even by changes in inventory. Advertisers then prepare advertisements (called “creatives” in industry parlance), and match those with various groups of keywords. After an ad campaign is up and running, the advertiser receives data from AdWords that enables it to evaluate the effectiveness of the campaign. Based on that information, the advertiser can modify bids, add or drop keywords, and modify its creative. When done manually, this iterative process, known as ad campaign “optimization,” is very expensive and time-intensive.²³⁹

Initially, Google offered advertisers two ways to access the AdWords system and manage their campaigns: the AdWords Front End and the AdWords Editor. The Front End is a web page that advertisers could log into and manage their campaigns. The Editor is a program advertisers can download. It allows advertisers to download campaign information from Google, make bulk changes offline, and then upload the changes back into AdWords. These two access points eventually proved to be insufficient because large advertisers and agencies were taxing the existing system. They would access the system and make so many changes to their campaigns that the system's capacity would be exceeded, causing it to be unavailable temporarily or even to crash.²⁴⁰

In response, in 2004, Google introduced a third method for accessing the AdWords system: the AdWords API. The API (application programming interface) allows advertisers and agencies direct programmatic access to the AdWords platform. The API contains a set of specifications that allows advertisers and agencies to develop their own software programs to interact with the API and allow them to set up and optimize their ad campaigns. APIs are now an essential feature of campaign management for advertisers and agencies managing multiple accounts.²⁴¹ All three major search advertising platforms (Google, Microsoft, and Yahoo!)²⁴² have APIs that allow this direct, automated interaction with ad platform features.

Google anticipated that the API would have several benefits, including: (1) reduced Google operating expenses (Google personnel having to provide manual processing and troubleshooting for large bulk sheets); (2) increased advertiser spend due to reduced advertiser operating costs; and (3) rapid development of advertiser and third party tools supporting AdWords campaigns²⁴³

By all appearances, the API has been a success. Advertisers using the API have increased their spend rate faster than other advertisers.²⁴⁴ Usage of the API has grown significantly.²⁴⁵

b. The Restrictive Conditions

Users of the Google AdWords API must agree to the terms and conditions Google imposes. The terms are non-negotiable and apply to all users. Two of those terms and conditions, which have been in place since the API was released, restrict advertisers' use of their own AdWords campaign data. The campaign data consists of data input by the advertiser into the API (including keywords, keyword groupings, and bid parameters) and data from the API reporting on the performance of the advertiser's campaign (including ad placement, clicks, and costs per keyword).²⁴⁶

As a condition of using the AdWords API, advertisers are prevented from using their campaign data in two ways, both of which inhibit their ability to manage ad campaigns on multiple search networks. First, advertisers cannot use a tool developed by a third party, or have a third party use such a tool on their behalf, to copy their campaign data directly from the AdWords API into an advertising campaign on another search network. Second, they cannot use a tool developed by a third party, or have a third party use such a tool on their behalf, to comingle AdWords campaign data with campaign data from another search engine.²⁴⁷ (We will refer to these conditions collectively as "the restrictive conditions.")

These restrictions essentially prevent any third-party tool developer or advertising agency from creating a tool that provides a single user interface for multiple advertising campaigns. Such tools would facilitate cross-platform advertising. However, the restrictions do not apply to advertisers themselves, which means that very large advertisers, such as

Amazon and eBay, can develop – and have developed – their own multi-homing tools that simultaneously manage campaigns across platforms.²⁴⁸ The advertisers affected are those whose campaign volumes are large enough to benefit from using the AdWords API, but too small to justify devoting the necessary resources to develop in-house the software and expertise to manage multiple search network ad campaigns.

c. Effects of the Restrictive Conditions

i. Effects on Advertisers and Search Engine Marketers (“SEMs”)²⁴⁹

As noted above, the immediate effect of the restrictive conditions has been to prevent the development and marketing of tools that would allow advertisers to manage ad campaigns on multiple search advertising networks simultaneously. Google routinely audits its API clients to determine compliance with the restrictive conditions. On several occasions, Google has required SEMs to remove functionality that would facilitate simultaneous management of search advertising campaigns.²⁵⁰ Other SEMs have stated that, but for the restrictive conditions, they too would develop and offer such functionality.²⁵¹ They would also be freer to innovate the tools they offer based on their clients’ demands.²⁵² Google anticipated that the restrictive conditions would eliminate SEM incentives to innovate.²⁵³

Many advertisers have said they would be interested in buying a tool that had multi-homing functionality.²⁵⁴ Such functionality would be attractive to advertisers because it would reduce the costs of managing multiple ad campaigns, giving advertisers access to additional advertising opportunities on multiple search advertising networks with minimal additional investment of time. The advertisers who would benefit from such a tool appear to be the medium-sized advertisers, whose advertising budgets are too small to justify hiring a

full service agency, but large enough to justify paying for such a tool to help increase their advertising opportunities on multiple search networks.

The restrictions do not prevent users from manually exporting data from Google AdWords into a CSV (or plain-text) file, and then uploading that data onto a competing advertising platform. Microsoft and Yahoo! offer instructions on how to upload data exported from AdWords, although Microsoft maintains that this process is quite slow and burdensome.²⁵⁵ Nonetheless, publicly, Microsoft does encourage users to import their AdWords campaigns to AdCenter, saying “it’s not that hard to do,” and providing a checklist of 14-16 steps to follow.²⁵⁶

Despite Google’s claims to the contrary, the AdWords Front End and AdWords Editor are not as effective as the API because access to data via the AdWords Front End and AdWords Editor is manual, while access via the API is “programmatic,” *i.e.*, it can be automated.²⁵⁷ Thus, the API alone is “scalable,” which is an important attribute for developers and advertisers.²⁵⁸ In fact, Google has consistently found that the spending growth of advertisers using the API has exceeded the spending growth for other advertisers, suggesting that the API is a more efficient portal into the AdWords auction than these other methods.²⁵⁹ Programmatic access makes possible the development of tools that can interact swiftly and automatically with AdWords, as compared to the slow, manual process of downloading data, modifying it on spreadsheets, and then uploading the changes.

Removing the restrictive conditions from the AdWords API Terms and Conditions would allow copying and synchronization of ad campaigns in mass,²⁶⁰ and reduce advertiser costs.²⁶¹

ii. Effects on Competitors

It seems likely that the removal of Google's API restrictions would increase the amount of advertising spend directed towards search networks that compete with Google. The rationale is that many advertisers would be willing to advertise on Bing or Yahoo! if they could do so without incurring significant transaction costs. As noted above, optimizing a search advertising campaign is time-intensive. It may not be worthwhile investing such efforts for additional, smaller search networks. Microsoft contends that if management tools that allowed advertisers to optimize their campaigns on multiple search networks simultaneously were available, many more advertisers would choose to advertise on the networks that compete with Google.

Data on advertiser "multi-homing" may show some of the effects of the restrictive conditions. "Multi-homing" refers to advertisers that advertise on multiple search networks. The data indicate that nearly all of the largest advertisers multi-home, but the percentage of multi-homing declines as the advertisers' spend decreases. According to a 2011 study by Microsoft, which divided the advertiser base into deciles based on total number of clicks (such that the largest nine advertisers comprise a decile – or 10 percent of total clicks – unto themselves), the distribution of multi-homing was as follows:²⁶²

Decile	Advertisers (from smallest to largest)	% multi-homing ²⁶³
1	208980	31.8
2	18346	64.8
3	4876	83.0
4	1736	90.8

5	706	94.9
6	316	96.5
7	144	97.9
8	68	98.5
9	28	96.4
10	9	100.0

Thus, outside of the two deciles composed of the smallest advertisers, the percentage of advertiser multi-homing is very high. However, given the very large number of advertisers in those two deciles, it turns out that less than 37 percent of all advertisers multi-home.²⁶⁴

If there were no incremental transaction costs, it would be reasonable to assume that all rational advertisers would multi-home. It may therefore be surmised that transaction costs are driving the smaller advertisers to choose not to multi-home. In this light, Microsoft's contention can be restated as follows: the restrictive conditions increase the transaction costs for cross-network campaign management, and thus decrease demand for all non-dominant networks. The multi-homing data support Microsoft's contention.

The multi-homing data do not reflect another potential form of harm: some advertisers who are multi-homing are likely doing so with less intensity on the non-dominant networks, which may cause them to spend less than they otherwise would on non-dominant networks relative to their share of total search. For example, Microsoft has conducted a study showing that even multi-homing advertisers bid on significantly more keywords on Google's AdWords platform than on Microsoft's AdCenter platform.²⁶⁵ Microsoft also claims that, while multi-homing advertisers optimize their Google campaigns on an almost-

daily basis, the same advertisers optimize their Microsoft campaigns far less frequently, on a weekly or bi-weekly basis.²⁶⁶

Staff conducted a series of interviews of randomly selected small advertisers to gather their anecdotal perspective on these issues. These interviews strongly tend to support the thesis that many small advertisers would extend their advertising to other search networks if they had access to a cross-platform optimization tool. Nearly all small advertisers interviewed showed interest in such a tool.²⁶⁷ They believed such a cross-platform optimization tool would be central to addressing their core constraints: time, sophistication, and money.²⁶⁸ When these transaction costs are coupled with Bing's limited volume, some small advertisers refrain from using Bing altogether.²⁶⁹ Furthermore, even those that do use Bing may not be fully optimizing their Bing campaigns because the benefits of Bing's limited user volume may not outweigh the transaction costs associated with full optimization.²⁷⁰

d. Internal Google Discussions Regarding the Restrictions

Internal Google documents support the notion that the removal of the restrictions would increase advertiser spend on competing networks. In 2007, when considering whether to offer a cross-network management tool, an API product manager wrote (and director of product management Richard Holden endorsed):

If we offer cross-network SEM in [Europe], we will give a significant boost to our competitors. Most advertisers that I have talked to in [Europe] don't bother running campaigns on [Microsoft] or Yahoo because the additional overhead needed to manage these other networks outweighs the small amount of additional traffic. For this reason, [Microsoft] and Yahoo still have a fraction of the advertisers that we have in [Europe], and they still have lower average CPAs [cost per acquisition].²⁷¹

This last point is significant. The success of Google's AdWords auctions has served to raise the costs of advertising on Google. With more advertisers entering the AdWords auctions,

the prices it takes to win those auctions have naturally risen. As a result, the costs per acquisition on Google have risen relative to the costs per acquisition on Bing and Yahoo!. Despite these higher costs, as this document notes, advertisers are not switching to Bing and Yahoo! because, for many of them, the transactional costs are too great.

In December 2008, a Google team led by Richard Holden evaluated the possibility of relaxing or removing the restrictive conditions, and consulted with Google chief economist Hal Varian. Based on that meeting, Holden wrote a series of significant observations:

1. Advertisers seek out SEMs and agencies for cross-network management technology and services;
2. The restrictive conditions make the market more inefficient;
3. Removing the restrictive conditions would “open up the market” and give Google the opportunity to compete with a best-in-class SEM tool with “a streamlined workflow”;
4. Removing the restrictive conditions would allow SEMs to improve their tools as well;
5. While there is a risk of additional spend going to competing search networks, it is unlikely that Google would be seriously harmed because “advertisers are going where the users are,” i.e., to Google.²⁷²

Thus, internally, Google recognized that removing the restrictions would create a more efficient market, but acknowledged a concern that doing so might diminish Google’s grip on advertisers. Nonetheless, following up on that meeting, Google began evaluating ways to improve the DART Search program. DART Search was a cross-network campaign management tool owned by DoubleClick, which Google acquired in 2008.²⁷³ Google engineers were looking at improving the DART Search product, but had to confront limitations imposed by the restrictive conditions. During his investigational hearing, Richard Holden steadfastly denied any linkage between the need to relax the restrictive conditions

and the plans to improve DART Search.²⁷⁴ However, a series of documents – documents authored by Holden – explicitly link the two ideas.

In December 2008, Holden, senior vice-president of ad products Susan Wojcicki, and others met to discuss the issue. Of the meeting, Holden wrote:

[O]ne debate we are having is whether we should eliminate our API T&Cs requirement that AW [AdWords] features not be co-mingled with competitor network features in SEM cross-network tools like DART Search. *We are advocating that we eliminate this requirement and that we build a much more streamlined and efficient DART Search offering and let SEM tool provider competitors do the same. There was some debate about this, but we concluded that it is better for customers and the industry as a whole to make things more efficient and we will maximize our opportunity by moving quickly and providing the most robust offering.*²⁷⁵

In February 2009, Holden wrote the executive summary for a DART Search product review, in which he advocated that Google “alter the AdWords Ts&Cs to be less restrictive and produce the leading cross-network toolset that increases advertiser/agency efficiency.” Such a move, he wrote, would “[r]educe friction in the search ads sales and management process and grow the industry faster.”²⁷⁶ In April 2009, in light of evident disapproval from Larry Page about the idea of removing the co-mingling restriction, Holden wrote: “We’ve heard that and we will focus on building the product to be industry-leading and will evaluate it with him when it is done and then discuss co-mingling and enabling all to do it.”²⁷⁷

In September 2009, the API product manager again raised the possibility of eliminating the restrictive conditions as a way to help DART Search, this time with the added argument that DART Search was not able to compete effectively against other SEM cross-network tools that might be violating those restrictive conditions.²⁷⁸ Before the issue was raised up the ladder to Susan Wojcicki, the API product manager asked Richard Holden’s advice:

I think the core issue on which I'd like to get Susan's take is whether she sees a high risk of existing spend being channeled to MS/Yahoo! due to a more lenient official policy on campaign cloning. Then, weigh that risk against the benefits: enabling DART Search to compete better against non-compliant SEM tools, more industry goodwill, easier compliance enforcement. Does that seem like the right high level message?²⁷⁹

It appears that Holden agreed that the concern of spend being channeled towards Google's competitors was part of the appropriate "high level message," because the issue was flagged in a powerpoint eventually presented to Larry Page in January 2010: "SEM tools will tout this official policy change strongly encouraging users to channel new or existing spend to other networks."²⁸⁰

The documents make clear that Google was weighing the efficiency of relaxing the restrictions against the potential cost to Google in market power. At a January 2010 meeting, Larry Page decided against removing or relaxing the restrictive conditions.²⁸¹ However, there is no record of the rationale for that decision or what weight was given to the concern that relaxing the restrictive conditions might result in spend being channeled to Google's competitors. Larry Page has not testified.²⁸² Holden testified that he did not recall the discussion.²⁸³ The participants at the meeting did not take notes "for obvious reasons."²⁸⁴ Nonetheless, the documents paint a clear picture: Google rejected relaxing the API restrictions, and at least part of the reason for this was fear of diverting advertising spend to Microsoft.

4. Google's Exclusive and Restrictive Syndication Agreements

Staff has investigated whether Google has entered into exclusive or highly restrictive agreements with website publishers that have served to maintain, preserve, or enhance Google's monopoly power in the markets for search, search advertising, or search and search

advertising syndication (or “search intermediation”). We recommend that the Commission issue a complaint against Google for this conduct.

a. Publishers and Market Structure

The buyers of search and search advertising syndication services are website publishers. In effect, any website that has content that it would like to monetize via ads is a potential buyer of syndication services. While there are thousands of these websites, a handful of the largest websites on the Internet account for the vast majority of syndicated search traffic and revenue.²⁸⁵ Google served approximately 118 billion AdSense (search syndication) queries in 2011, but just 10 websites generated almost 80 percent of that traffic.²⁸⁶

The biggest customers for search and search advertising syndication services are e-commerce retailers (*e.g.*, Amazon and eBay), traditional retailers with large associated websites (Wal-Mart, Target, Best Buy), and Internet Service Providers (“ISPs”),²⁸⁷ which operate their own web portals.²⁸⁸

Below this small group of very large publishers, there are another roughly 25 companies with significant query volume. These mid-tier companies include vertical e-commerce sites such as Kayak (travel), along with smaller retailers and smaller ISPs such as EarthLink. None of these mid-tier companies generate even one percent of Google’s total AdSense query volume. Below these companies, publisher size drops off rapidly to well under 0.1 percent of Google’s query volume.²⁸⁹

The search provider pays the publisher (website) a percentage of the revenue generated from user ad clicks on the publisher’s website. In the industry, these agreements are known as “revenue sharing” arrangements. The higher this percentage, the more the

publisher earns per click. But, for the publisher to earn any money, the user must first click on an advertisement. The actual payment received by the publisher is actually a function of three critical variables: (1) the volume of user clicks on one of the syndicated advertisements; (2) the “CPC” or “cost-per-click” the advertiser is willing to pay for each click on its content; and (3) the revenue sharing percentage. In industry parlance, the rate of user clicks and CPC are aggregated together to form the “monetization rate.”

b. Development of the Market for Search Syndication

Google entered into its first AdSense for Search (AFS) agreements with Internet portals AOL and Earthlink in 2002.²⁹⁰ Google’s goal then was to develop and grow the nascent industry of syndicated search advertising.²⁹¹ At this time, Google was bidding against incumbent search advertising firm Overture (later acquired by Yahoo!) for exclusive agreements with syndication partners.²⁹²

Google’s early syndication deals were characterized by generous terms that favored the publishers.²⁹³ Because Google wanted to establish a presence on these websites, it offered large, up-front financial guarantees to website publishers. For example, to win major deals in 2002 (such as AOL and Earthlink), Google offered financial guarantees without knowing for certain whether the websites could actually deliver the traffic necessary to cover the guarantees.²⁹⁴ To protect itself, Google required exclusivity so that Overture could not cherry-pick more valuable website traffic and undermine Google’s attempt to return a profit on these deals.²⁹⁵

c. Specifics of Google’s Syndication Agreements

Today, the typical AdSense agreement contains terms and conditions that describe how and when Google will deliver search, search advertising, and other (contextual or

domain related) advertising services. There are two main categories of AdSense agreements: AFS (search), which provides search advertising to publishers, and AFC (content), which provides contextual advertising to publishers. Staff's investigation has focused on Google's AFS agreements.

Within the AFS category, there are two types of agreements: (i) Google Service Agreements ("GSAs"), which are individually negotiated agreements with large partners; and (ii) standard online contracts, which are non-negotiable and non-exclusive agreements that any publisher can sign.²⁹⁶ Standard online agreements make up the bulk of Google's AFS partners, but only a small portion of AFS revenues.²⁹⁷ The bulk of the revenues come from the GSAs with Google's 10 largest partners, which collectively comprise almost 80 percent of Google's overall AFS query volume in 2011.²⁹⁸ All of Google's GSAs contain some form of exclusivity or "preferred placement" for Google, and the GSAs typically last from one to three years.²⁹⁹

Google's exclusive AFS agreements effectively prohibit the use of non-Google search and search advertising within the sites and pages designated in the agreement.³⁰⁰ Some exclusive agreements cover all properties held by a publisher globally; other agreements provide for a property-by-property (or market-by-market) assignment.³⁰¹

By 2008, with its market presence clearly established, Google began to migrate away from outright exclusivity in all of its agreements toward what Google terms "preferred placement" in many of its agreements.³⁰² In essence, the "preferred placement" provision requires the publisher to display three Google ads or the same number of ads the publisher acquires from any competitor (whichever is greater); that Google's ads be displayed in an

unbroken block; and that Google's ads receive "preferred placement" – or rather, that they occupy the most prominent position on the publisher's website.³⁰³

Notably, Google maintained "preferred placement" restrictions in both its GSAs *and* its standard online agreements until July 2012, when Google eliminated the "preferred placement" language from its online agreements. Google maintains that it was not aware of the presence of this provision in its standard online agreement until the recent investigational hearing of Google's vice-president for search services, Joan Braddi, where Staff questioned Braddi about this particular provision.³⁰⁴

d. Effects of Exclusivity and Preferred Placement

Staff interviewed both large and small customers for search and search advertising syndication services to understand how and why they contract with Google, whether their contracts are exclusive or restrictive, and the customers' appetite for using multiple syndication providers. We summarize the key findings from these interviews below.

i. Common Publisher Responses

All interviewees report that Bing's search and search advertising syndication product is not competitive across-the-board with Google today. We found universal agreement that Bing's syndication product is markedly inferior to Google's offering. For example, Amazon reported that Bing's product monetizes at less than half the rate of Google's.³⁰⁵

Business.com, a smaller e-commerce site, told us that Google would have to cut its revenue share to Business.com from 64.5 percent to somewhere in the 30 percent range before the company could seriously consider shifting from Google to Microsoft, and even that would require Microsoft to provide a 90 percent revenue share because Microsoft's platform has such low monetization in comparison to Google's platform.³⁰⁶

The customers generally confirmed Microsoft's claim that Bing's search syndication offering is inferior, at least in part, because Microsoft's network of advertisers is smaller than Google's. With a significantly larger advertiser base, Google is more likely to have a relevant, high-quality advertisement for any given query, which greatly improves its monetization rate relative to Microsoft.³⁰⁷

A smaller publisher reported that, essentially, the only websites exclusively using Bing's search syndication service today are those that have been kicked out of Google's syndication network for violating its terms of service.³⁰⁸ While we know from other interviews that this comment is an exaggeration, it does capture the general tenor of the comments we received about the relative quality of Microsoft's search and search advertising syndication product.

Many publishers reported that Microsoft was not aggressively trying to win their syndication business. One mid-tier publisher stated that Microsoft did not even return its inquiry calls during the publisher's last contract renewal discussions with Google.³⁰⁹ A Microsoft executive acknowledged that Bing needs a larger portfolio of advertisers in order to present a competitive offering to publishers, and so the company has not been focused on winning new search syndication business.³¹⁰

Another common theme we heard from many (but not all) of the publishers is that serving advertising is a relatively minor part of their business and not a significant strategic focus for them. For example, Wal-Mart operates its website principally as an extension to its retail operations (letting Wal-Mart customers buy products either in-store or from the website at their preference).³¹¹ Best Buy's principal goal for its website is to be the provider of presale information, as 60 percent of its customers do online research before coming to the

store.³¹² Customers, like Wal-Mart and Best Buy, with large unrelated business goals for their websites tend to view search and search advertising syndication as a source of valuable incremental revenue, but these websites are not operated or optimized to generate syndication revenue.

Many of the publishers Staff interviewed had little interest in using multiple providers of search and search advertising syndication services. Most had not seriously considered the possibility because Bing monetizes so much more poorly than Google does today.³¹³ A few publishers also reported that Microsoft itself sought various forms of exclusivity in their negotiations with publishers.³¹⁴ Some large publishers reported that a “mix-and-match” arrangement would be complex and difficult for them to build and implement.³¹⁵ Even Amazon, which actually does manage to use both Bing and Google advertisements today, faces some challenges in using multiple syndication providers. Amazon will use a single syndication provider on each page that it serves because of the risk that mixing and matching providers inside the same page will result in ad duplication. This is a significant issue because showing multiple versions of the same ad on a single page is viewed as a highly undesirable end user experience.³¹⁶

Beginning in 2008, Google undertook a systematic effort to lower the revenue share percentage for its AdSense partners.³¹⁷ Many publishers have seen significant declines in their revenue share percentage over time as they renewed their contracts with Google.³¹⁸ In total, Google reduced its payments (traffic acquisition cost, or “TAC”) to its AFS partners from 80.4 percent in the first quarter of 2009 to 74.0 percent in the first quarter of 2010.³¹⁹ Some partners have experienced reductions in their revenue share of 10 percent or more.³²⁰ The publisher reaction to these declines varied, but none of the publishers viewed the

reductions in their AdSense revenue share percentage as large enough to justify shifting their business to Bing or to begin serving more display advertisements instead of search ads.³²¹

ii. Publishers' Views of Exclusivity Provisions

When asked whether their AdSense contract with Google was exclusive, the publishers gave widely varied answers. A number of the large publishers reported that their AdSense contract with Google was exclusive,³²² but some reported that their AdSense contracts were not exclusive.³²³ Most of the publishers that reported exclusivity provisions did not complain to us about them.

Staff's interviews did identify a fairly small, but significant, group of publishers that were deeply concerned by the exclusivity provisions in their Google AdSense agreements. All of these customers view search and search advertising syndication income as a substantial part of their business, and all have the technical sophistication to integrate multiple suppliers into their on-line properties. We summarize these concerns below.

eBay. eBay is Google's largest search and search advertising syndication partner, accounting for just over 27 percent of the syndicated U.S. queries answered by Google in 2011.³²⁴ Section 14 of eBay's AdSense agreement states that the agreement is not exclusive.³²⁵ However, the contract requires preferential treatment for Google AdSense ads, which eBay has characterized as equivalent to exclusivity.³²⁶ The preferential treatment terms include requirements that eBay show as many Google AdSense ads on each page as third-party advertisements, that no third party advertisements appear above the Google AdSense advertisements, that Google AdSense advertisements cannot be interspersed with third party advertisements, and that Google AdSense advertisements cannot be less prominently displayed than third party advertisements.³²⁷

eBay sought to have this provision deleted during the company's last contract renewal in 2011, and was rebuffed.³²⁸ eBay agreed to continue with this provision, in part, due to Google's willingness to leave the revenue share percentage unchanged, despite lowering it to most other publishers.³²⁹

eBay sought relief from the restrictions in its Google AdSense agreement in its last renewal because it has done some testing that leads it to believe that Bing's advertising platform has become competitive in certain sectors (e.g., technology advertisements), and eBay believes that it could make more money by working with multiple providers of search syndication service.³³⁰ In other words, in areas where Bing's search and search advertising syndication platform monetizes at roughly the same level as Google's platform, Bing could offer a higher revenue share than Google, increasing eBay's revenue.

NexTag. NexTag is a comparison shopping website and a Google syndication customer. In 2010, NexTag was Google's 15th largest AFS customer. Historically, NexTag had an exclusive agreement with Google.³³¹ Although NexTag was able to remove the exclusivity language in its Google contract in 2010, NexTag was forced to agree to a series of restrictions that it characterizes as essentially the same thing as exclusivity.³³² These restrictions include a requirement to show Google advertisements on the same page as any third-party provider's advertisements, and always to show the Google content above the competing content.³³³ NexTag reports that moving away from explicit exclusivity even to this kind of *de facto* exclusivity required substantial, difficult negotiations with Google.³³⁴

Today, NexTag does not use any non-Google provider of search and search advertising syndication services.³³⁵ NexTag has had conversations with both Yahoo! and Bing, and would like to use their product "on a filler basis," but has been unable to do so

because it would have such poor placement on the NexTag site due to the Google contract restrictions.³³⁶

Business.com. Business.com is a “B2B” lead generation/vertical site. In effect, the site marries commercial customers looking for products (such as business phone systems) with providers of those products.³³⁷ Business.com is several orders of magnitude smaller than the other complainants, barely making it onto a list of the top 60 providers of AdSense query volume. Business.com reports that it has an exclusive AdSense agreement with Google.³³⁸ This agreement materially limits how Business.com can design its web pages. If Business.com were relieved from its exclusive arrangement, it would test Bing and Yahoo! by product category, and place their advertisements in a more prominent position in those categories where their performance warranted.³³⁹ The company would also likely take advertisements from both Google and Bing/Yahoo!, and show them on the same page, with placement dictated by relative performance in each category.³⁴⁰ Loosening up Google’s exclusivity restrictions would allow Business.com to improve its revenue, and also allow it to introduce some new features that would make the site more accessible and user-friendly.³⁴¹

Amazon. Amazon is the world’s largest e-commerce site³⁴² and the second largest AFS customer after eBay. On a worldwide basis, Amazon earns roughly \$175 million from search syndication services, with \$169 million of that total coming from Google’s AdSense search product.³⁴³ Amazon does not have an exclusive agreement with Google, and actually splits its inventory among Google, Bing, and Yahoo!.³⁴⁴ However, Amazon finds that the Bing and Yahoo!’s advertisements monetize at about 46 percent the rate of Google’s advertisements.³⁴⁵ Because of the very large monetization gap, Amazon can only afford to use Bing and Yahoo! for a very small percentage of its total search syndication needs.³⁴⁶

Amazon splits its search syndication business by full page only.³⁴⁷ In other words, Amazon does not mix and match Google and Bing or Yahoo! content within the same page.³⁴⁸

Amazon uses Bing and Yahoo! despite the relatively poor performance because Amazon is worried about being so dependent on a single supplier for such an important revenue source.³⁴⁹ Because Amazon's basic business operates on very thin margins, its \$175 million in syndication revenues represents a material source of profit for the company.³⁵⁰

Amazon is concerned that it will be forced to sign an exclusive agreement with Google during the next contract renegotiation.³⁵¹ During the last renegotiation, Amazon wanted a five-year deal, but Google would only give Amazon a one-year extension unless it agreed to send Google 90 percent of all its queries, which Amazon refused to agree to as part of a formal agreement, although Amazon already sends in excess of 90 percent of its queries to Google.³⁵²

IAC. IAC is an umbrella Internet content company that operates roughly 50 different websites, including the Ask.com search engine site, *Newsweek*, CityGrid, and Urbanspoon.³⁵³ IAC was the third largest source of syndicated query volume to Google in 2011, representing 9.6 percent of Google's total U.S. AFS traffic.³⁵⁴ IAC has an exclusive agreement with Google for search and search advertising syndication.³⁵⁵ However, the agreement does not require every IAC property to use Google's AdSense product. Rather, each property may elect whether to use Google's search syndication product, and if it does, it must do so on an exclusive basis.³⁵⁶

In 2008, IAC explored the possibility of partnering with Yahoo! and Microsoft as alternatives to Google, before renewing with Google.³⁵⁷ All of the parties IAC contacted

during the negotiation period wanted an exclusive arrangement.³⁵⁸ Ultimately, Google's offering was the most lucrative, and IAC re-signed with Google.³⁵⁹

However, IAC expressed concern about Google's requirement of exclusivity for subsidiary properties, such as local website CityGrid, that wanted to explore "mix-and-match" options with other search advertising providers. Indeed, in 2008, IAC declined to opt CityGrid into its larger exclusive agreement, attempting to forge an alternative route with other search advertising providers (including CityGrid's own ad network). Ultimately, however, CityGrid determined that it could not completely replace Google's syndication network, even with a patchwork of other providers. Since then, CityGrid has been forced to "opt in" to IAC's larger exclusive agreement. Although CityGrid wants the option of using other networks (including its own), and supplementing those ads with Google ads, it cannot do so under IAC's existing agreement with Google. More generally, IAC expressed concern about the lack of competition in search and search advertising syndication because there are no good substitutes for search advertising.³⁶⁰

While IAC initially seemed supportive of the story we heard from the other concerned publishers, during a recent follow-up call, IAC's tone changed substantially. One of the key complainants on the initial call was the president of IAC subsidiary CityGrid. That executive has since left IAC, and our more recent call was with another executive, who was in charge of business development for IAC. This executive was far less sanguine as to IAC's likelihood of splitting their business in the absence of exclusivity. He noted that, while he was also concerned about the lack of competition in the market, he could not see moving incremental traffic to Bing or other search advertising providers unless the monetization gap narrowed significantly. The departure of the key executive with the closest

knowledge of the issues and the most detailed concerns suggests we may have significant issues obtaining clear, unambiguous testimony from IAC that reflects their earlier expressed concerns.

iii. Effects on Competitors

Microsoft reports that it could substantially benefit from serving even a portion of the query and advertising volume from some of Google's largest syndication customers.³⁶¹ Microsoft asserts that even a 5 to 10 percent increase in its overall query traffic would be "very meaningful" because Bing is at a lower part of the scale curve where "each percentage point is critical."³⁶² Thus, Google's exclusive and restrictive agreements serve to deny Microsoft incremental scale that Microsoft argues will make it a more efficient competitor.

In addition to the impact on Microsoft, specialty search advertising platforms may be hampered by exclusivity provisions. When IAC complained to us, they told us that they sought to build their own platform to serve local search advertising.³⁶³ Such platforms would not be able to serve a full panoply of search advertising, but only certain niche categories. Google's exclusivity provisions make it less likely that small local competitors like IAC's nascent offering can viably emerge.

III. LEGAL ANALYSIS

A monopolization claim under Section 2 of the Sherman Act, 15 U.S.C. § 2, has two elements: (i) the "possession of monopoly power in the relevant market" and (ii) the "willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."³⁶⁴

An attempted monopolization claim requires a showing that (i) “the defendant has engaged in predatory or anticompetitive conduct” with (ii) “a specific intent to monopolize” and (iii) a dangerous probability of achieving or maintaining monopoly power.³⁶⁵

A. GOOGLE HAS MONOPOLY POWER IN RELEVANT MARKETS

“A firm is a monopolist if it can profitably raise prices substantially above the competitive level. . . . [M]onopoly power may be inferred from a firm’s possession of a dominant share of a relevant market that is protected by entry barriers.”³⁶⁶ Google has monopoly power in one or more properly defined markets.

1. Relevant Markets and Market Shares

A properly defined antitrust market consists of “any grouping of sales whose sellers, if unified by a hypothetical cartel or merger, could profitably raise prices significantly above the competitive level.”³⁶⁷ Typically, a court examines “such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product’s peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.”³⁶⁸

Staff has identified three relevant antitrust markets.

a. Horizontal Search

Horizontal, algorithmic web search (hereafter “horizontal search”) likely constitutes a properly defined relevant market. As discussed earlier, horizontal search engines, such as Google, attempt to cover the content of the Internet as widely as possible, and are specifically designed to return a comprehensive list of search results on any topic. By contrast, “vertical” search engines focus on more narrowly-defined categories of content, such as product

shopping or travel. Vertical search engines are not viable substitutes to horizontal search for many types of queries.

Staff's investigation has uncovered no credible evidence that vertical websites, even in aggregate, could replace a horizontal search engine. None of these websites attempt to crawl the web comprehensively, and none have built the kind of sophisticated algorithms that would be necessary to search and organize the entire web effectively. As discussed in greater detail below, there are formidable barriers to vertical search engine firms expanding into horizontal search.

Nevertheless, it is conceivable that these narrow, vertical search properties could pick up additional query volume in response to a small, but significant, non-transitory increase in price ("SSNIP") in horizontal search, thereby potentially disciplining horizontal search providers.³⁶⁹ As discussed earlier, our investigation has revealed that Google views vertical websites with some concern, and has moved aggressively to build its own vertical offerings.³⁷⁰ Sergey Brin, among others, testified that vertical websites are substitutes "[f]or some kinds of queries."³⁷¹

Critically, however, Staff's investigation has identified no mechanism for vertical search properties to broadly discipline a hypothetical monopolist in horizontal search. Web search queries are monetized through search advertising, and that advertising is sold by individual keywords which each have their own independent demand functions. This means that, at best, a hypothetical monopolist in horizontal search might be inhibited from imposing a SSNIP on a narrow set of keywords where there is strong vertical competition. But for the literally billions of other queries where no strong vertical exists (or is likely to arise), there would be nothing to constrain a hypothetical monopolist from imposing a SSNIP. In other

words, to the extent vertical websites compete with horizontal search providers within their limited areas of competence, nothing prohibits price discrimination between those narrow areas and the broader web.

Even in the narrow areas where vertical websites have subject matter competence, they face challenges in competing effectively with horizontal search providers. This is because comprehensive coverage of all topic areas appears to be a very important driver of demand, even to websites focusing on specific topic areas. The ability to offer comprehensive search results was characterized as “fundamental” by Google’s former CEO, Eric Schmidt.³⁷² Schmidt explained that the company needs to build brand equity with its customers by providing consistently good results regardless of the content of the query, and that strong results across-the-board lead to specific queries in commercial search:

So if you, for example, are an academic researcher and you use Google 30 times for your academics, then perhaps you’ll want to buy a camera...So long as the product is very, very, very, very good, people will keep coming back...The general product then creates the brand, creates demand and so forth. Then occasionally, these ads get clicked on.³⁷³

In effect, users are habituated into using Google for all their queries because of its comprehensive scope, and so they may be more likely to turn to Google when they have commercial queries, instead of starting at a vertical website. Schmidt’s testimony is corroborated by the representations of several of the vertical search firms, who note that they are dependent on horizontal search providers for significant amounts of their traffic, because even many vertical search users tend to begin their search with a query on Google, Bing or Yahoo!.³⁷⁴

When asked to identify his competitors in web search, Schmidt did not mention any vertical property: “[A]s far as I can tell, the industry has two main horizontal however you

want to call them, Web search indices players. And they would be Google and Microsoft. There used to be three. And as you know, Microsoft and Yahoo did a deal which pretty much collapsed their activities together.”³⁷⁵

Schmidt’s testimony echoes internal company documents. Numerous Google documents describing the market for web search discuss only Google, Microsoft’s Bing, and Yahoo!. Google circulates monthly market share reports for Google, Bing, and Yahoo!.³⁷⁶ Google also regularly monitors and compares the quality of these three services.³⁷⁷ Sergey Brin testified that he was not aware of such quality comparisons being performed against any vertical competitors, at least not on any regular basis.³⁷⁸ All of this evidence is consistent with the proposition that horizontal search constitutes its own, separate relevant market.

The relevant geographic market for web search is limited to the United States. Search engines are optimized to return results (and advertisements) relevant to the users in the country they are serving. Countries have different languages, interests, and cultural norms that are all reflected in their search results. For example, a user in London typing the word “tube” into a search engine is likely looking for subway information, while a dairy farmer in Iowa with the same query is probably not interested in the London Underground. These issues mean that users in the United States are unlikely to view foreign search engines as viable substitutes for national search engines that are optimized to their language and culture. Although Google itself has successfully crossed some international borders (for example, Google is extremely popular in Europe), this is a relative rarity, and other major international search engines – like Baidu (China) and Yandex (Russia) – have not managed the same feat. In a prior investigation, the Department of Justice concluded that national boundaries

properly define the scope of the geographic market for web search. Our investigation has uncovered no basis on which to deviate from this conclusion.³⁷⁹

Google is clearly the dominant provider of “general search” services in the United States. Google’s own sites have a 66.7 percent share of the market as of May 2012, according to ComScore, a leading industry measurement firm.³⁸⁰ Google also provides search services to two small, formerly independent web search operators (Ask.com³⁸¹ and AOL³⁸²), which collectively account for another 4.6 percent of the relevant market according to ComScore.³⁸³ In sum, the total Google-powered query share in the United States is 71.3 percent, according to ComScore.³⁸⁴

The balance of this market is controlled by the Microsoft/Yahoo! search alliance. Yahoo! holds approximately 15 percent of the market, and Bing (owned by Microsoft), holds approximately 14 percent.³⁸⁵ As noted earlier, since 2009, Microsoft and Yahoo! have been partners in what essentially amounts to a long-term joint venture for search, where Microsoft powers the algorithmic search results for both Yahoo! and Bing, while Yahoo! handles the direct relationships with large advertisers for the combined service.³⁸⁶ Advertisers that want to purchase search advertising on Yahoo! or Bing cannot buy access to these properties separately, but rather must purchase advertisements that run on both sites simultaneously.³⁸⁷ So, in effect, there are just two providers of horizontal search: Google and the Bing/Yahoo! search alliance.

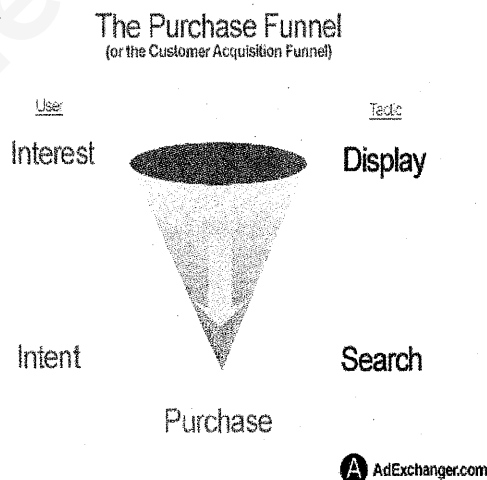
Firm	ComScore Market Share, May 2012
Google	71%
Bing/Yahoo	29%

Google's market share (depending on whether it is calculated using Google.com share alone, or inclusive of the other search engines it powers) meets or exceeds "the generally accepted floor" for monopolization.³⁸⁸ Defendants with market shares in this range have previously been found to possess monopoly power.³⁸⁹

b. Search Advertising

Search advertising likely constitutes a properly defined relevant market.³⁹⁰ As discussed earlier, search advertising is displayed in response to specific keyword queries entered by the user. Search advertising is distinguishable from other forms of online advertising, such as display advertising, contextual advertising, behavioral advertising, and social media advertising due to its "inherent scale, targetability, and control."³⁹¹ According to Google, "[t]hey are such different products that you do not measure them against one another and the technology behind the products is different."³⁹²

Advertisers often refer to a "purchase funnel" to describe the various types of advertising and their purposes. An example is illustrated below:³⁹³



As illustrated by the funnel, search advertising responds directly to users' revealed intent at the critical moment when a user is ready to "purchase." With display, advertisers

are typically more interested in developing user interest – or “branding” – than in eliciting a direct response from the consumer, whereas the primary attraction of search advertising is its propensity to generate direct responses.³⁹⁴ As Hal Varian, Google’s chief economist put it, “[o]ne way to think about the difference between search and display/brand advertising is to say that ‘search ads help satisfy demand’ while ‘brand advertising helps to create demand.’”³⁹⁵

The different manners in which display and search advertising are priced is consistent with their distinct overarching goals. Search advertisements – whose main goal is to directly drive user purchases – are priced on a “cost-per-click” basis (*i.e.*, an advertiser only pays if a user clicks on the ad). Conversely, display advertisements – whose main goal is to spark interest and drive awareness – are priced based on the number of times the ad is displayed.

Display and search advertising are also separately managed, measured, and tracked internally at Google.³⁹⁶ Similarly, for advertisers and agencies, display and search are different categories.³⁹⁷ The ad types require different creative, targets, budgets, and tracking.³⁹⁸ Most advertisers spend in both categories, as they consider display and search advertising to be complements.³⁹⁹

Evidence suggests that search and display are indeed complements rather than substitutes. Google has observed steep click declines when advertisers have attempted to shift budget to display advertising. For example, when automobile manufacturer Chevrolet decided to suspend its search advertising campaign for two weeks, and rely on display advertising alone, it lost 30 percent of total clicks on its website.⁴⁰⁰

In recent years there has been some perceived convergence between the functions of display and search advertising.⁴⁰¹ With varying degrees of success, both display and search

advertising can be used for branding and awareness, and both can be used for direct response.⁴⁰² Nevertheless, search ads remain distinct because they lack the media-rich, flashy graphics and interactivity of display ad formats.⁴⁰³ Conversely, display advertising is far less successful at generating direct sales because, unlike search ads, display ads are not targeted to potential customers at the moment of purchase.⁴⁰⁴ As noted earlier, users click on display ads far less frequently than on search ads.⁴⁰⁵

As online advertising continues to evolve, new offerings have appeared that do not fit squarely into the traditional search and display categories: contextual advertising; re-targeted display (or behavioral) advertising; and social media advertising.⁴⁰⁶ Of all forms of online advertising, only search advertising allows advertisers to show an ad based on what the user is expressing an interest in at the moment the ad is shown.⁴⁰⁷ Numerous advertisers have confirmed this point.⁴⁰⁸ Because of this critical advantage, search advertisements “convert” at much higher rates than other types of advertisements,⁴⁰⁹ and are considered by many advertisers to be, by far, the most effective form of online advertising available.⁴¹⁰ For example, according to Amazon, “no other advertising channel comes close, and none can substitute for search advertising.”⁴¹¹

Numerous advertisers report that they would not shift advertising spend away from search advertising, even in the face of large price increases.⁴¹² In formal responses to interrogatories, advertisers have stated that “there is no substitute for search advertising,” and that, in response to price increases far more significant than SSNIP, they would continue to invest in search advertising.⁴¹³ For example, it would take at least a 100 percent increase in the cost of search advertising before Living Social would begin shifting spend to other forms

of advertising.⁴¹⁴ However, a minority of advertising agencies and advertisers said they would move advertising dollars away from search advertising in response to a SSNIP.⁴¹⁵

Google's internal documents and testimony confirm that there is currently no viable substitute for search advertising. Both AdWords vice-president of product management Nick Fox and chief economist Hal Varian have previously stated that search advertising spend does not come at the expense of other advertising dollars.⁴¹⁶ And former Google CEO Eric Schmidt has twice testified unequivocally – in both this investigation and in a prior Department of Justice investigation – that search advertising is “the most effective tool for reaching the customers that are actually prepared to buy,”⁴¹⁷ and “has the best ROI of any advertising as best we can determine.”⁴¹⁸

Both the Commission and the Department of Justice have previously found online “search advertising” to be a distinct product market. Specifically, in 2007, the Commission noted that “advertisers purchase different types of ad inventory for different purposes,” and concluded that “the sale of search advertising does not operate as a significant constraint on prices or quality of other online advertising.”⁴¹⁹ The Department of Justice found that search advertising was a relevant antitrust market in 2008, and again endorsed search advertising as a relevant market in 2010.⁴²⁰

While no court has yet determined that search advertising constitutes a relevant market, courts have repeatedly recognized narrow advertising markets. For example, in *Times-Picayune Publishing Co. v. United States*,⁴²¹ the Supreme Court identified newspaper advertising as a unique antitrust market. There, the Court held that there were two “separate though interdependent markets” – one market for selling news and ads to readers and a

separate market for selling the readership to newspaper advertisers.⁴²² Courts have followed that lead, typically identifying advertising markets within media separately.⁴²³

However, a recent district court case concluded that search advertising is not a distinct market for antitrust purposes.⁴²⁴ In reaching this conclusion (on a motion to dismiss), the judge appears not to have considered any of the unique characteristics of search advertising.⁴²⁵ The analysis, in any event, was very limited. On balance, we believe the evidence points strongly toward search advertising as a separate market.

Like the relevant geographic market for horizontal search, the relevant geographic market for search advertising limited to the United States.⁴²⁶

Google, through its AdWords platform, is the dominant provider of search advertising in the United States, with between 76 and 80 percent of the market, according to several industry-wide market trackers,⁴²⁷ and some 1.3 million advertisers in the U.S.⁴²⁸ Google's principal rival is the combination of Bing-Yahoo!, which, as noted earlier, operate a joint search advertising network, and combine to represent between 12 and 16 percent of the market.⁴²⁹ Bing and Yahoo! together have approximately 313,000 advertisers.⁴³⁰

c. Syndicated Search and Search Advertising ("Search Intermediation")

Syndicated search and search advertising (or "search intermediation") likely constitutes a properly defined product market. As described earlier, horizontal search providers sell – or "syndicate" – their services to other websites. Thus, when a user goes to a website, he or she can run searches on that site through a search box, which is "powered" by a search engine. The search engine can also return search advertisements to the website. When the user clicks on an advertisement, the search engine and the website share the revenues.

The consumers in this market are the publisher websites that wish to provide search services and return search advertisements on their websites, while the sellers are the horizontal search providers, Google, Bing, and Yahoo!.⁴³¹

Staff has interviewed a number of publishers of various sizes, and they provide very consistent responses on the issue of cross-elasticity of demand. Publishers report that search and search advertising syndication monetizes better than display advertising or other content that they might place on their websites.⁴³² The publishers do not view other forms of advertising as viable substitutes for search and search advertising syndication.⁴³³ None of the publishers told us that a modest (5 to 10 percent increase) in the price for search and search advertising syndication would cause them to shift away from search and search advertising syndication in favor of other forms of advertising or web content.⁴³⁴

Further support for this relevant market comes from Google's efforts to systematically reduce TAC, or the amount of money Google shares with the publisher from syndicated searches. A decline in revenue share is effectively a price increase to the publishers. A number of the publishers have seen their revenue share from Google decline significantly in recent years as a result of Google's efforts.⁴³⁵ Of the publishers Staff has interviewed, none have reduced or eliminated their use of search and search advertising syndication in response to these price increases.⁴³⁶ In effect, Google's successful efforts to systematically to reduce revenue share constitutes a natural experiment to determine the likely response to a SSNIP. The publishers' response to Google's price increases has been universally consistent with the proposition that search and search advertising syndication (search intermediation) is a relevant market.

The evidence gathered in Staff's investigation is consistent with the Department of Justice's conclusion on the same issue. The Department of Justice previously recognized "search syndication" as a distinct product market, with only three significant market participants: Google, Yahoo!, and Microsoft.⁴³⁷

Like the relevant geographic markets for both horizontal search and search advertising, the relevant geographic market for search and search advertising syndication (search intermediation) – the syndication of these same services – is limited to the United States.⁴³⁸

Google, through its AdSense platform, is the dominant provider of search and search advertising syndication services, with some 75 percent of this market, according to ComScore.⁴³⁹ Microsoft and Yahoo! collectively account for at least another 22 percent.⁴⁴⁰

2. Substantial Barriers to Entry Exist

The provision of Internet search and search advertising, and consequently, the syndication of these services, are characterized by substantial entry barriers. Specifically, developing and maintaining a competitively viable search or search advertising platform requires substantial investment in specialized knowledge, technology, infrastructure, and time. These markets are also characterized by significant scale effects.

a. Technology and Specialization

A search engine requires algorithmic technology that enables it to search the Internet, retrieve and organize information, index billions of regularly changing web pages, and return relevant results instantaneously that satisfy the consumer's inquiry.⁴⁴¹ Developing such algorithms requires highly specialized personnel with high levels of training and knowledge in engineering, economics, mathematics, sciences, and statistical analysis.⁴⁴²

b. Substantial Upfront Investment

Along with specialized algorithms, search and search advertising platforms require enormous investments in the technology and infrastructure required to crawl and categorize the entire Internet.⁴⁴³ For instance, in 2011, Google spent more than \$5 billion on research and development, although this figure is inclusive of all of Google's divisions.⁴⁴⁴ And, in 2010, Microsoft invested more than \$4.5 billion into developing its algorithms and building the physical capacity necessary to operate Bing.⁴⁴⁵

c. Scale Effects

As discussed at length earlier, Internet search, search advertising, and search syndication are markets that are characterized by substantial scale effects. As more consumers use a general search engine, its search algorithms are honed to improve its accuracy in retrieving the information that consumers want. More users also leads to an increased number of advertisers. And, as the number of advertisers that place ads – and the number of consumers who click on those ads – increases, the ad-serving algorithms improve their ability to predict what advertisements stimulate consumer “clicks.” This, in turn, increases monetization for the search engine, its advertisers, and its syndication partners, which leads to the cyclical effect of greater participation by both advertisers and publishers. This effect, which has been termed the “virtuous cycle,” represents a significant barrier for any potential entrant.⁴⁴⁶

Indeed, according to Microsoft, its greatest barrier is obtaining sufficient scale through its collection of search and advertising data, and it faces an enormous task in trying to catch up with Google. Despite substantial investments in technology and infrastructure, Microsoft has yet to make a significant dent in Google's market share, and has been losing

some \$2 billion per year as it attempts to effectively compete against Google.⁴⁴⁷ Indeed, the continuing viability of Bing – the only competing horizontal search platform to Google – is today in question.⁴⁴⁸

d. Reputation, Brand Loyalty, and the “Halo Effect”

New entrants may face a significant barrier in attempting to supplant Google as the household name in search. Google has used its reputation and brand name to its advantage, introducing a myriad of new products and services that work to keep users within the Google world, through what Microsoft has termed the “halo effect.”⁴⁴⁹ This refers to the phenomenon that consumers who use a vertical website owned by a general search engine may be more likely to use the affiliated general search engine than a competing search engine.⁴⁵⁰

According to Microsoft, the fact that Google directs users to its own – as opposed to its competitors’ – various vertical websites tends to drive general search traffic back to Google.com, magnifying scale effects, and reinforcing Google’s position in the search and search advertising markets. This is confirmed by Google. As former Google CEO Eric Schmidt has previously attested:

“One of the things that we’ve learned is that if we have a powerful so called vertical site that does something really, really neat, that person is more likely to use Google in its traditional ways and therefore click on our ads.”⁴⁵¹

e. Exclusive and Restrictive Agreements

Google’s exclusive and restrictive agreements pose yet another barrier to entry, as many potential syndication partners with a high volume of customers are locked into agreements with Google. These agreements act as barriers that prevent Bing and Yahoo! from offering competing syndicated search and search advertising platforms to highly-

trafficked websites, which, in turn, magnifies the problems of scale effects. In addition, the exclusive agreements act as barriers to smaller, more specialized search advertising platforms (e.g., a network specializing in local Washington, D.C.-based advertising, or in specific categories, such as travel).

B. GOOGLE HAS ENGAGED IN EXCLUSIONARY CONDUCT

Conduct may be judged exclusionary when it tends to exclude competitors “on some basis other than efficiency,” *i.e.*, when it “tends to impair the opportunities of rivals” but “either does not further competition on the merits or does so in an unnecessarily restrictive way.”⁴⁵² In order for conduct to be condemned as “exclusionary,” Staff must show that Google’s conduct likely impairs the ability of its rivals to compete effectively, and thus to constrain Google’s exercise of monopoly power.⁴⁵³

1. Google’s Preferencing of Google Vertical Properties Within Its SERP

As described earlier, Staff has investigated whether Google is unlawfully preferencing its own vertical content over that of rivals, while simultaneously demoting rival vertical websites, in order to maintain, preserve, or enhance its monopoly power in the markets for search and search advertising. Although we believe that this is a close question, we conclude that Google’s preferencing conduct does not violate Section 2.

a. Google’s Product Design Impedes Vertical Competitors

“As a general rule, courts are properly very skeptical about claims that competition has been harmed by a dominant firm’s product design changes. . . . Judicial deference to product innovation, however, does not mean that a monopolist’s product design decisions are *per se* lawful.”⁴⁵⁴ In *United States v. Microsoft*, the D.C. Circuit concluded that several

technical actions undertaken by Microsoft, in order to integrate its Internet Explorer browser into its Windows operating system, were anticompetitive.⁴⁵⁵

Here, we evaluate Google's conduct through the *Microsoft* lens of monopoly maintenance: whether Google took these actions in order to impede a nascent threat to Google's monopoly power in the markets for search and search advertising.⁴⁵⁶ Google's internal documents explicitly reflect – and testimony from Google executives confirms – a concern that Google was at risk of losing, in particular, highly profitable queries to vertical websites. As vice president of product management Nicholas Fox noted in May 2009, Google's

inability to serve this segment [of vertical lead generation] well today is negatively impacting our business. Query growth among high monetizing queries (>\$120 RPM) has declined to ~0% in the UK. US isn't far behind (~6%). There's evidence (e.g., UK Finance) that we're losing share to aggregators.⁴⁵⁷

The potential competitive threat to Google addressed here is not that the vertical websites will displace Google entirely, but that, collectively, they will undercut Google's power over the most lucrative segments of its search and search advertising portfolio. Additionally, the vertical websites could help erode barriers to growth for general search competitors, such as Microsoft, that are positioned to compete with Google across the board rather than in a few smaller, distinct categories. This theory – advanced by Microsoft – posits that the proliferation of vertical websites creates a healthy “ecosystem.” In turn, this ecosystem allows a provider of general search to compete with Google by partnering with various vertical websites, rather than having to serve the market at multiple different levels to attract users and, in turn, advertisers.⁴⁵⁸

The theory of harm to competition is mainly one of reduced innovation: that, when faced with Google's seamless ability to enter into highly monetizable categories of commerce and simultaneously to disadvantage its competitors, existing competitors cannot innovate at the same pace; new or innovative vertical websites will cease to enter the market; and consumers will be faced with a corresponding reduction in innovation and choice.⁴⁵⁹

b. Google's SERP Changes Have Resulted In Anticompetitive Effects

Google's conduct has resulted in significant harm to rival vertical websites in a number of different categories. As described earlier, in the comparison shopping category – one of the first areas in which Google vigorously expanded its own offering, while simultaneously demoting rival offerings – many rival websites have experienced significant declines in traffic. Data obtained from NexTag and Shopping.com, among others, suggests that, as a result of Google's conduct, these websites have experienced significant drops in traffic. Google's internal data confirms this impact.⁴⁶⁰

Simultaneously, Google's prominent placement and display of its Universal Search properties led to gains in user share for its own properties. For example, Google's inclusion of Google Product Search as a Universal Search result turned a property that the Google product team could not even get *indexed* by Google's web search results into the number one viewed comparison shopping website on Google.⁴⁶¹

c. Google's Justifications for the Conduct

Google claims that the conduct under review improves its product and benefits users. “[A] design change that improves a product by providing a new benefit to consumers does not violate Section 2 absent some associated anticompetitive conduct.” *Allied Orthopedic Appliances, Inc. v. Tyco Health Care Group LP*, 592 F.3d 991, 998-99 (9th Cir. 2010).

Product design change is an area of conduct where courts do not tend to strictly scrutinize asserted procompetitive justifications.⁴⁶² In any event, Google's procompetitive justifications are compelling.

For example, Google argues that any design changes to its SERP have improved its product by providing consumers with direct, relevant, and "better" results. Specifically, Google asserts that its Universal Search results are an "inherent aspect" of Google's overall search results "that help render Google's search results more relevant and useful to users."⁴⁶³ It seems clear that Universal Search is a useful improvement to the product. Both Yahoo! and Microsoft appear to generally agree that Universal Search results are relevant and useful to users.⁴⁶⁴ While each search platform serves up its vertical content in different ways, the fact that all three major search engines offer some equivalent of Universal Search makes it difficult to dispute that users place a high value on being able to obtain specialized results.

Moreover, Google correctly notes that the path from "10 blue links" toward a more comprehensive provision of thematic results long predates Google's formal introduction of Universal Search in 2007,⁴⁶⁵ and that Google's introduction of certain "OneBox" results on its SERP predate Google's alleged concern about any potential "vertical threat." For example, in 2003, Google began showing some product results through a Froogle OneBox at the top of its search results page,⁴⁶⁶ and in 2004, began displaying some local results in a Local OneBox at the top of the page.⁴⁶⁷

Google justifies the preferential placement of its Universal Search content by asserting that the "apples and oranges" problem prevents Google from doing a head-to-head comparison of its property versus competing vertical properties. This seems to be correct. Google's method of rankings its properties does create an inability to directly compare the

results. Google measures the quality of its verticals by assigning relevance values to each individual vertical result, *i.e.*, to each merchant in a specific product search, or to each location in a local search (which may be ranked by popularity, rating, number of Google reviews, distance, and other factors).

Google's web search results, on the other hand, receive a score based on the text read from crawling the contents of the page. Based on the crawled text, the pages are rated using factors such as click-through rates (*i.e.*, how often previous users clicked on the page), commerciality (*i.e.*, whether the page has too many ads), and the page's PageRank.⁴⁶⁸ With Google's current algorithms, Google cannot directly compare, say, the ranking for a specific restaurant (in its own local results) to the ranking for an entire web page (in someone else's local results).⁴⁶⁹ On the other hand, Microsoft has told us that Bing uses a single signal – click-through rate – to determine where to place the Universal Search content within the organic search results.⁴⁷⁰

Google's justification for promoting its own properties above that of competing properties automatically when those properties appear (recall the algorithms that boosted Google Product Search to the top of the SERP whenever another comparison shopping website was deemed relevant) is not as strong, but still has some force. Google's justification for this conduct is that, if another vertical property is deemed relevant by Google's algorithms, Google's vertical property must also have high quality results – and Google's rich Universal Search results are more helpful to the user than “blue links” to other comparison shopping websites.

Google's justification for surfacing only (or mainly) Google-sourced content – rather than third-party vertical content – within its Universal Search results is less convincing.

Google notes it is industry practice to show only the search engine's results in the vertical. Google also claims that serving third-party data in its Universal Search results would create significant technical and latency (speed) issues. The evidence shows that it would be technologically feasible to serve up third-party results in Google's Universal Search results. Indeed, Bing does this today with its flight vertical, serving up Kayak results;⁴⁷¹ and Google itself originally considered third-party OneBoxes.⁴⁷²

Google also vigorously defends its "demotion" of certain vertical content, arguing that Google's algorithms are designed solely with the goal of improving a user's search experience.⁴⁷³ It is true that most firms naturally want to appear prominently in Google's natural search results, and, today, entire businesses are devoted to helping companies improve their ranking on Google's SERP. Companies seeking prominence in Google's search results employ a wide variety of strategies to improve their visibility. Google has a substantial interest in protecting its search results from being "gamed" by websites for commercial gain, and so is constantly tweaking and adjusting its algorithms in order to protect the integrity of its search results. Google can legitimately claim that it needs to demote undesirable websites in order to improve the quality of the user experience. Staff has certainly uncovered contemporaneous evidence suggesting that improving search experience was at least one goal of Google's algorithm changes, including algorithms that specifically demoted certain vertical websites.⁴⁷⁴

However, one aspect of Google's demotions that especially troubles Staff – and is not addressed by the above justification – is the fact that Google routinely, and prominently, displays its own vertical properties, while simultaneously demoting properties that are *identical* to its own, but for the fact that the latter are competing vertical websites.⁴⁷⁵

Google's defense for this conduct essentially boils down to "user expectations." Sergey Brin testified that Google's showcasing of its Universal Search results is not inconsistent with the demotion of other similar vertical content because Universal Search represents a "mode change" for users.⁴⁷⁶ According to Brin:

So when you search for products rather than searching for web pages, I feel like that's more of a mode change. You know, you're switching – in fact, you can switch You can switch to product mode. And I think that would be confusing in the user interface if you were to just get a web link, you know, that looked like a normal Google result and yet it takes you to another Google search. I think people understand mode changes. They might understand resorting something in a different way. But I think ultimately when you click on an individual [web] link, you want to get an answer. You don't want to get another set of search results.⁴⁷⁷

In other words, Google's position is that, if a user conducts a search on Google for a product, that user is looking for *Google's* search results, not another list of search results from another search provider. However, Google has presented no evidence of user expectations in this area.⁴⁷⁸ Indeed, Google's vertical properties are typically not labeled as "Google" results, and thus, outwardly at least, provide no cue to a user that he or she is "switching" to a different mode of Google search.⁴⁷⁹ Nevertheless, Brin testified that "the user interface is pretty clear"⁴⁸⁰ – "the link that says 'shopping results for' is clearly a specialized part of the interface. It doesn't appear to be just like another web page."⁴⁸¹

d. Google's Additional Legal Defenses

Setting aside efficiency justifications, Google has argued – successfully in several litigations – that it owes no duty to assist in the promotion of a rival's website or search platform, and that it owes no duty to promote a rival's product offering over its own product offerings.⁴⁸² Indeed, one reading of *Trinko* and subsequent cases is that Google is privileged in blocking rivals from its search platform unless its conduct falls into in one of several

specific exceptions referenced in *Trinko* (e.g., where there is an affirmative voluntary prior course of dealing).⁴⁸³ Alternatively, one may argue that *Trinko* should not be read so broadly as to overrule swathes of antitrust doctrine.⁴⁸⁴

Additionally, Google has long argued that its general search results are opinions that are protected speech under the First Amendment, and that such speech should not be subject to government regulation.⁴⁸⁵ In *Search King Inc. v. Google Technology*,⁴⁸⁶ plaintiffs alleged that Google's search results were not objectively accurate. Google argued, and the Western District of Oklahoma agreed, that, while the PageRank search *process* might be objective, the search algorithms themselves are not, making search results a form of subjective speech protected by the First Amendment.⁴⁸⁷ Later decisions have called this conclusion into question,⁴⁸⁸ and Staff believes that Google's assertion of First Amendment protection here is overbroad.

Moreover, *Search King* did not examine whether Google's search results constitute "commercial speech," the content of which is subject to regulation under certain circumstances. This is because *Search King* long predates Google's introduction of Universal Search, which blends its own commercially-oriented vertical content with its natural search results. A finding that Google's search results constitute expressions "related solely to the economic interests of the speaker and its audience" would likely alter the First Amendment analysis.⁴⁸⁹ Speech that "is 'linked inextricably' with the commercial arrangement that it proposes" gives the federal government an interest in the speech, particularly when the underlying commercial transaction is one that can be regulated by the government.⁴⁹⁰

In sum, Staff acknowledges the difficulties inherent in this area of the investigation, not only because of the legal hurdles we would face, but because of the strong procompetitive justifications Google has set forth. We are faced with a set of facts that can most plausibly be accounted for by a narrative of mixed motives: one in which Google's course of conduct was premised on its desire to innovate and to produce a high quality search product in the face of competition, blended with the desire to direct users to its own vertical offerings (instead of those of rivals) so as to increase its own revenues. Indeed, the evidence paints a complex portrait of a company working toward an overall goal of maintaining its market share by providing the best user experience, while simultaneously engaging in tactics that resulted in harm to many vertical competitors, and likely helped to entrench Google's monopoly power over search and search advertising. The determination that Google's conduct is anticompetitive, and deserving of condemnation, would require an extensive balancing of these factors, a task that courts have been unwilling – in similar circumstances – to perform under Section 2. Thus, although it is a close question, Staff does not recommend that the Commission move forward on this cause of action.

2. Google's "Scraping" of Rivals' Vertical Content

As described earlier, Staff has investigated whether Google has unlawfully "scraped" – or appropriated – the content of rival vertical websites in order to improve its own vertical products, so as to maintain, preserve, or enhance its monopoly power in the markets for search and search advertising. We conclude that this conduct violates Section 2 and Section 5.

a. Google's "Scraping" Constitutes a Conditional Refusal to Deal or Unfair Method of Competition

Google's "scraping" of rivals' content to improve its own vertical products – and its threatened refusal to deal with some of these competitors – may be appropriately condemned as a conditional refusal to deal under Section 2. In *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko*,⁴⁹¹ the Supreme Court reiterated "the long recognized right of [a] trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal."⁴⁹² However, the Court acknowledged that, "[u]nder certain circumstances, a refusal to cooperate with rivals can constitute anticompetitive conduct and violate § 2."⁴⁹³

Identifying those "circumstances" have been the subject of much debate in the post-*Trinko* world. In affirming the holding of *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*⁴⁹⁴ – albeit, as "at or near the outer boundary of § 2 liability"⁴⁹⁵ – the *Trinko* court provided some clues as to the continuing viability of the doctrine. At issue in *Aspen Skiing* was the termination by the defendant of a joint, multiple-day, all-ski area ticket issued by the defendant (owner of three out of four ski areas in Aspen) and the plaintiff (owner of the fourth ski area in Aspen). After repeatedly demanding an increased share of the joint profits, the defendant finally canceled the joint ticket. The defendant also rejected the plaintiff's "increasingly desperate measures" to recreate the joint ticket, ultimately even rejecting the plaintiff's offer to buy defendant's tickets at the retail price. Under these circumstances, the Supreme Court upheld the jury's finding of liability under Section 2.⁴⁹⁶

The *Trinko* court suggested that the *Aspen Skiing* defendant's

unilateral termination of a voluntary (*and thus presumably profitable*) course of dealing suggested a willingness to forsake short-term profits to achieve an anticompetitive end. Similarly, the defendant's unwillingness to renew the

ticket even if compensated at retail price revealed a distinctly anticompetitive bent.⁴⁹⁷

Appellate courts have focused upon *Trinko*'s reference to the "unilateral termination of a voluntary course of dealing," as a critical limitation upon a monopolist's discretion in determining whether to deal with a rival. For example, in *American Central Eastern Texas Gas Co. v. Duke Energy Fuels LLC*,⁴⁹⁸ the Fifth Circuit upheld an arbitrator's determination that the defendant natural gas processor's refusal to contract with a competitor for additional processing capacity was unlawful. Plaintiff was both a "gatherer" and "processor" of natural gas. The plaintiff alleged that, because it was not economically feasible to open its own processing plant, it contracted with the defendant for processing capacity.⁴⁹⁹ After two years of using the defendant's processing plant, when the plaintiff entered into renegotiations for additional capacity, the defendant proposed terms that it "knew were unrealistic or completely unviable" to the plaintiff, including a very high price, "in order to exclude [the plaintiff] from competition with [the defendant] in the . . . gas processing market."⁵⁰⁰ The Fifth Circuit upheld the arbitrator's conclusion that the defendant unlawfully refused to deal with the plaintiff, acknowledging that, while courts "must be cautious in finding exception to the right to refuse to deal," here, the defendant's refusal, in the context of a "prior course of dealing" with plaintiff, supported a finding of liability.⁵⁰¹

Here, much like in *Aspen Skiing* and *Duke Energy*, there is a compelling narrative regarding a prior voluntary course of dealing. Specifically, Google had long-established, voluntary, and mutually beneficial licensing agreements with both Yelp and TripAdvisor. Through its agreements with these (and other) third parties, Google secured relevant and high-quality content for its web search product. In exchange, through their presence in

Google's web search results, Yelp, TripAdvisor, and others secured web traffic, and grew their own businesses.

Google developed and launched directly competing products, and then changed its relationship with these websites, seeking to develop its own vertical offerings by scraping the content of its partners, such as Yelp and TripAdvisor. When the websites balked at Google's attempt to free-ride on their content in this manner, Google threatened to refuse to deal with these websites altogether, despite the parties' long-standing "voluntary (and thus presumably profitable) course of dealing."⁵⁰² Like the *Aspen* defendant, Google had no efficiency justification for its threatened refusal to deal.⁵⁰³ Rather, Google's threat to remove high quality content that was relevant to – and desired by – its users (so desired, in fact, that Google appropriated and incorporated the content into its own local product) would clearly degrade *Google's own product*.

Thus, the only logical explanation for Google's conduct is that Google took these actions in order to *force* its partners to allow it to appropriate the valuable content they had created. Indeed, Google's ability to use Yelp's content depended entirely on its monopoly power over general search. Twice, when Yelp was faced with a similar situation with Microsoft, Yelp did not hesitate to threaten to block Microsoft from crawling Yelp's website altogether.⁵⁰⁴ In both cases, Microsoft negotiated with Yelp to change the way it displayed Yelp's data.⁵⁰⁵ By contrast, when presented with an all-or-nothing choice by Google – either to allow Google to use its content in Google Local, or to risk removal from Google's search index altogether – Yelp reacted very differently, continuing to allow Google to crawl Yelp and to use its content in Google's local vertical offering.⁵⁰⁶ As Professor Herbert Hovenkamp has warned: "We will very quickly lose the social gains to be had from

collaborative networks if we permit one dominant firm to run away with all of the private gains once it is in a position to do so.”⁵⁰⁷

There are some distinctions between the conduct in *Aspen* and Google’s conduct here that bear mention. First, the exchange of value here is non-financial. The benefit to Google accrues from securing high-quality content, while Google’s partners secure traffic. However, this distinction appears to be insignificant. Whether the payment is in the form of dollars or other benefit is of little consequence to the purpose or effect of Google’s threatened refusal to deal.⁵⁰⁸

More importantly, Google ultimately did not “refuse” to deal with Yelp, and their relationship continues to this day. While Google never followed through on its threat to remove these websites entirely from its web search results, it is clear that Google’s threat was intended to produce, and *did* produce, the desired effect (for a significant period of time), which was to coerce Yelp and TripAdvisor into backing down on their efforts to have their valuable content removed from the Google Local product. Google’s threat also sent a message to the broader marketplace that Google could, and would, use its monopoly power over search to extract the fruits of its rivals’ innovations. Consequently, Google’s threat itself – although not a consummated refusal to deal – may be challenged as exclusionary conduct.⁵⁰⁹

This theory of exclusion does not reach the search preferencing conduct we assessed *supra* at pp. 78-86. Here, we view the evidence of benefit to Google stemming from its licensing agreements with third-party content providers as offering the critical distinction. Google’s long-standing licensing agreements with parties such as Yelp and TripAdvisor offer clear and convincing proof not just of an affirmative relationship between Google and these

complainants, but also of Google's *clear benefit* from its relationships with these parties – thus providing the critical intent evidence that is missing from the search preferencing case.

While the Universal Search complainants assert that Google's previous inclusion of their websites in Google's web search results constitutes proof of a "voluntary" relationship that benefited Google, this argument is not sufficient to create the necessary proof. The act of categorizing and returning websites to users is at the very heart of what Google does. It would defy logic to argue that, simply by virtue of indexing hundreds of billions of web pages (and returning millions of websites in its general web search results), Google has formed a relationship with each and every one of these websites. And it would be even further afield to argue that, the fact that Google at one time returned its web search results in a one manner, and has since changed the manner in which it returns those web results, constitutes evidence that Google is abandoning some "presumably profitable" course of dealing in favor of destroying competition. Google is certainly entitled to change the manner in which it returns its web search results, even if those changes disadvantage its competitors.

However, we also understand that this right is *not* unlimited. To that end, we believe that the "scraping" conduct engaged in by Google, in contrast to the search biasing conduct, goes beyond clearly established limits. This is because, here, Google not only changed its course of dealing toward rivals with whom it had long-standing licensing agreements, but also because Google acted in a manner *clearly contrary to its own interests* in so doing.

Even if the Commission determines that Google's scraping conduct does not rise to the level of a Section 2 violation, the Commission might condemn the conduct as a stand-alone violation of Section 5. Indeed, a Section 5 claim could extend to Google's scraping conduct even where no prior relationship existed (for example, Google's scraping of

Amazon's product ranking information, which was never part of any licensing agreement between the parties). Under this approach, Google's conduct can be analogized to the imposition of higher costs, through onerous terms of dealing, on websites whose content Google deems the most valuable to its own web search product.⁵¹⁰ Viewed in this way, condemnation of Google's conduct depends not on any prior established relationship with the affected vertical websites, but rather, on Google's motivation in scraping content from high-quality vertical competitors – the motivation to keep vertical websites from siphoning users from Google's web search property (and thus, maintaining, preserving, or enhancing its monopoly position in the market for search).

While a traditional Section 2 analysis relies on a prior course of dealing as a gatekeeper, or a bright line proxy, for showing that the defendant's purpose and effect was anticompetitive, Section 5 empowers the Commission to demonstrate harm to the competitive process in other ways.⁵¹¹ For example, Google's threat (and willingness) to degrade its own web search product – by banishing high-quality vertical websites from its web search results altogether – suggests that Google's motive in scraping high-quality content from its vertical competitors was not procompetitive.

b. Google's "Scraping" Has Resulted In Anticompetitive Effects

As described earlier, Google's "scraping" of the content of rival vertical websites has resulted in harm to these vertical websites and, more broadly, to the competitive process. Because Google scraped information over an extended period of time, it is difficult to point to declines in traffic that are specifically attributable to Google's conduct. However, Google's conduct has arguably lessened the incentives of vertical websites like Yelp, TripAdvisor, CitySearch, and Amazon to innovate.

More broadly, the natural and probable effect of Google's conduct is to diminish the incentives of other vertical websites to invest in, and to develop, new and innovative products.⁵¹² Entrepreneurs may be reluctant to develop new websites, and investors may be reluctant to sponsor that development, recognizing that Google can use its monopoly power over search to simply appropriate competing content that it deems lucrative to its own search empire.⁵¹³ Further, Google's conduct suggests that Google itself has failed to innovate, as it would have to have done in the absence of scraping content from its rivals.

c. Google's "Scraping" Is Not Justified By Efficiencies

Google's main defense for its conduct is that, by authorizing Google to crawl and index content, these websites, in effect, acquiesced to Google's use of this content in any manner Google deemed appropriate. Google argues that websites like Yelp could simply have refused to allow Google to crawl their content at any time. As discussed above, however, Yelp and others believed that remaining in Google's index was critical to survival, and as such, could not afford to simply block Google from crawling their websites altogether. At no time was Google under the impression that its use of Yelp content in Google Local was acceptable to Yelp.

Marissa Mayer and Sameer Samat testified that it was extraordinarily difficult for Google, as a technical matter, to remove sites like Yelp from Google Local without also removing them from its web search results.⁵¹⁴ Google's almost immediate compliance after Yelp sent a formal "cease and desist" letter to Google, however, suggests that the "technical" hurdles were not a significant factor in Google's refusal to comply with repeated requests to remove competitor content from Google Local.⁵¹⁵ Indeed, parties have long been allowed to "opt out" of inclusion with Google's vertical news offering, Google News.⁵¹⁶

In sum, the evidence shows that Google used its monopoly position in search to scrape content from rivals and to improve its own complementary vertical offerings, to the detriment of those rivals, and without a countervailing efficiency justification. Google's scraping conduct has helped it to maintain, preserve, and enhance Google's monopoly position in the markets for search and search advertising. Accordingly, we believe that this conduct should be condemned by the Commission.

3. Google's API Restrictions

Staff has investigated whether Google has employed anticompetitive contractual restrictions to prevent advertisers from using third-party tools to simultaneously manage campaigns on Google's search advertising platform (AdWords) and rival advertising platforms (*e.g.*, Microsoft's AdCenter). As described earlier, Microsoft has alleged that Google is denying Microsoft critical scale by employing these restrictions, and thus impairing Microsoft's ability to compete effectively in the markets for general search and search advertising. We conclude that Google's API restrictions violate Section 2.

Google's introduction of the AdWords API was a clearly procompetitive development that benefitted advertisers, SEMs, and Google alike. However, the restrictive conditions in the API usage agreement have anticompetitive effects without offsetting precompetitive benefits. They impede the efficient use of advertisers' own campaign data, creating additional, unnecessary transaction costs for advertisers that might wish to use that data to run advertising campaigns on other search networks. The restrictive conditions are not inherently tied to the product. Accordingly, we may evaluate Google's inclusion of the restrictive conditions as a stand-alone act and weigh their anticompetitive effects against any potential procompetitive benefits.⁵¹⁷

Should the restrictive conditions be found to be unreasonable restraints of trade, they could be removed today instantly, with no adverse effect on the functioning of the API. Any additional engineering required to make the advertiser data interoperable with other search networks would be supplied by other market participants. Notably, because Google would not be required to give its competitors access to the AdWords API, there is no concern about whether Google has a duty to deal with its competitors.⁵¹⁸

a. The Restrictive Conditions Are Unreasonable

The restrictive conditions limit the ability of advertisers to make use of their own data and, by doing so, they prevent the development and sale of third party tools and services that would allow automated campaign management across multiple search networks. The restrictions do not affect advertisers that build their own campaign management tools, nor do they affect third-party tools and services that manually export the campaign data and then upload that data into a campaign on another search network.

While Google emphasizes how much is allowed under the terms and conditions, it is undeniable that the restrictions constrain the development and sale of cross-network campaign management tools and services. SEMs have had to remove campaign cloning functionality that they have developed. They are unable to develop or offer tools and services that use algorithms – which can operate continuously and at scale – to perform cross-network campaign management and optimization.⁵¹⁹ Even Google is constrained by these restrictions, having had to forgo improving its DART Search tool to offer such capabilities, despite internal estimates that such functionality would benefit Google and advertisers alike.⁵²⁰

The restrictive conditions are unreasonable if their anticompetitive effects outweigh their procompetitive virtues. Our investigation has shown that the restrictive conditions do not have any procompetitive virtues, whereas their anticompetitive effects, while difficult to measure, are substantial.

b. The Restrictive Conditions Have Resulted In Anticompetitive Effects

The restrictive conditions harm competition in three broad ways. They reduce innovation, increase transaction costs, and degrade the quality of Google's rivals in search and search advertising.

As noted above, several SEMs have been forced to remove campaign cloning functionality by Google. Beyond removing these products from the marketplace, Google's restrictive conditions have created a profound disincentive for tool developers to innovate in this area. A high performance cross-network campaign management tool would need to be a sophisticated product, able to allocate and adjust bids on keywords in different auctions with different and rapidly shifting competitive environments. However well the first-generation tools performed, it seems obvious that their performance would only have improved as SEMs and their clients tested these tools in the field. Google's restrictive conditions stopped this market segment in its infancy. There would be little to no demand for a cross-network management tool without the prospect of accessing the dominant search network, AdWords.

Google's imposition of the restrictive conditions has increased the transaction costs for all advertisers other than those large enough to make the internal investments to develop their own campaign management tools.⁵²¹ For the rest, they must devote additional staff time to manage multiple parallel campaigns. Some may choose to use work-arounds, by which they download their AdWords campaigns into CSV (or plain-text) files, make the requisite

changes, then upload them into other search networks – a process they must repeat every time they make any changes to their campaign (for active advertisers, this can be a step they must make continuously). Others may just manage the campaigns separately. Either way, it is clear that the cost of managing campaigns is higher than it would otherwise be, but for the restrictive conditions, and clearly transaction costs can decrease advertising spend.⁵²²

Facing higher transaction costs, economic logic indicates that many advertisers would forgo advertising on non-dominant search networks, while others who do advertise on the other networks spend less time managing those campaigns, with a corresponding decrease in spend.⁵²³ As noted above, multi-homing data appears to support the former effect.⁵²⁴ As to the latter effect, as described earlier, a recent Microsoft study suggests that multi-homing advertisers bid on significantly more keywords on Google's AdWords platform than on Microsoft's AdCenter platform, particularly on critical "tail" keywords.⁵²⁵

Google suggests that its API restrictions have *de minimis* effects because, as described earlier, the largest advertisers (who account for a significant portion of overall revenue) already multi-home.⁵²⁶ But Google ignores the importance of the substantial number of smaller advertisers who do not multi-home. This group of advertisers is critical to Microsoft, not just in expanding its coverage over a larger portion of queries, but specifically in covering "tail" queries, particularly those queries geared toward local markets.⁵²⁷ For example, while Microsoft might be able to display a generic ad for 1-800-FLOWERS in response to a query seeking "flowers in Washington, D.C.," Google would potentially have a far richer offering in this area, with numerous smaller advertisers providing the user with a "fully built out set of choices."⁵²⁸

Moreover, Google ignores the possibility that even larger advertisers that multi-home would do so more without the restrictions. As described above, Microsoft's internal studies suggest that advertisers who advertise on both platforms do so unevenly and unequally, thus leading to better, more targeted, and more relevant ads on AdWords than on AdCenter. As described earlier, having the "right" ad for the "right" user at the "right" time is critical to a search engine's ability to improve its ad-serving algorithms and its revenue-per-search (or RPS).⁵²⁹ The lack of smaller advertisers, combined with the lack of regular optimization by even the larger advertisers who advertise on both platforms, places Microsoft in a significantly inferior position to Google in terms of being able to provide that "right" ad for the "right" user at the "right" time.

While the magnitude of these effects are unclear, their direction is clear: advertisers are spending less on the non-dominant search networks. For advertisers, this means forgone advertising opportunities that presumably would have been profitable, but for the restrictive conditions. For Google's rivals, the diminished spend resulting from the restrictive conditions means lost revenue, which diminishes their ability to invest in quality improvements in search. The reduction in ads placed also reduces the overall quality of the ads served on the rival search networks, which reduces the usefulness of the ads served to users, reducing, in turn, users' propensity to click on ads, an effect that broadly degrades the quality of the rival search network. It is also possible, though more speculative, that reduced ad quality may modestly reduce the usefulness of the rival search engines, particularly on very commercial queries, which in turn may suppress the number of searches performed on the rival networks. The degradation of Google's rivals both as advertising platforms and as

search engines would be, in effect, the inverse of the virtuous circle from which Google benefits.⁵³⁰

c. The Restrictive Conditions Are Not Justified By Efficiencies

The restrictive conditions are not functionally connected to the API in any way. They do not make it run faster, better or more securely.⁵³¹ The only justification Google offers for the restrictive conditions is to correct what Google calls a “misalignment of incentives” for SEMs and agencies serving as intermediaries between Google and advertisers seeking to advertise on AdWords.⁵³² Google’s stated concern is that SEMs and agencies have an incentive to cut engineering and personnel costs in developing tools and services for cross-network campaign management, and, as a result, they will likely adopt a “lowest common denominator” approach, which would diminish the performance of campaigns run on AdWords.⁵³³ One Google executive described SEMs’ and agencies’ incentives as follows:

There wasn’t a lot of focus on what the return on investment was. It was more focused on the volume of clicks being driven through the system. And, in turn, they wanted to build the least cost software possible. And the way to do that is to be able to put all this stuff together in one interface and race to what we would call often the lowest common denominator. Essentially ... cherry-picking the features from each ad network that were common, but not necessarily showing the distinction or the qualitative pieces that were different about each ad network to the advertiser.⁵³⁴

This concern about “misaligned incentives” is the only justification offered by Google for the restrictive conditions.⁵³⁵ The evidence shows that this justification is unsubstantiated and is likely a pretext. All of the SEMs and agencies we spoke to described the critical importance of delivering a high return on investment to their clients.⁵³⁶

Numerous SEMs and agencies provide their services in a highly competitive environment.⁵³⁷

Economic logic dictates that SEMs and agencies that fail to deliver campaign management

tools that perform well will lose clients. In fact, even if SEMs and agencies were in no danger of losing their clients' business, they would still have a strong incentive to improve their clients' returns as a way to encourage their clients to spend more on search advertising, increasing the third parties' commissions in the process. In a round-table discussion hosted by Google, SEMs and agencies made this exact point to Google.⁵³⁸ In brief, these third parties incentives are highly *aligned* with Google's interests, precisely the opposite of what Google contends.⁵³⁹

Google, meanwhile, is unable to identify any concrete examples of any ill effects from the purportedly misaligned incentives of SEMs and agencies. Google has represented to advertisers and agencies that "we have found that advertisers experience higher returns when all AdWords functionality is available to them in a clear, *functionally discrete*, and coherent manner."⁵⁴⁰ However, Google has no such evidence.⁵⁴¹ Google did investigate the potential influence SEMs would have on the rate of spending by their clients, and determined that the spend for advertisers represented by SEMs increased at a higher rate than did spend for other advertisers.⁵⁴² Google has not engaged in any experiments to determine what effect relaxing the restrictive terms and conditions might have.⁵⁴³

Moreover, there is already a different provision in the API AdWords Terms and Conditions that adequately addresses any concern about misaligned incentives. As a condition of using the API, SEMs and other tool developers are required to expose a Google-defined set of minimum functionality.⁵⁴⁴ The required minimum functionality provision directly addresses any legitimate concerns that Google might have about SEMs failing to expose important features of AdWords to their advertiser clients. Google has not explained how the required minimum functionality requirement is inadequate in this regard.

Meanwhile, the required minimum functionality requirement does not interfere more than necessary with how third parties design their tools and services. The restrictive conditions, on the other hand, have a substantially wider effect on how third parties conduct their business.

There are also documents from 2004 that suggest that the restrictive conditions are not a remedy for concern about third party “misaligned incentives,” but rather, were motivated by an anticompetitive desire to harm competitors and discourage entry: “Sergey [Brin] and Larry [Page] are big proponents of a protectionist strategy that prevents third party developers from building offerings which promote the consolidated management of [keywords] on Google and Overture (and whomever else).”⁵⁴⁵

In one 2004 document, the API product manager was looking for “specific points on how we can prevent a new entrant (MSN Ad Network) from benefitting from a common 3rd party platform that is cross-network.”⁵⁴⁶ In a related presentation, Google listed as a concern “other competitors are buoyed by lowered barriers to entry” and, two options to address that concern: (1) “applications must have Google-centric UI functions and branding” (i.e., the comingling restriction); and (2) “disallow cross-network compatible applications from using API” (i.e., the copying restriction).⁵⁴⁷

The same document lists, as a separate concern, “Google differentiators are normalized away,” which appears to be an alternative formulation of the lowest common denominator concern. The option listed for that concern is “enforce must-have functionality in certified applications.”⁵⁴⁸ This 2004 language appears to refer to what is now known as the “required minimum functionality” provision of the API terms and conditions.⁵⁴⁹ As noted previously, under this provision, SEM tools must expose all of the functionality that

Google deems important to the performance of AdWords. Although Google now claims that the required minimum functionality condition *and* the restrictive conditions are both aimed at the lowest common denominator concern,⁵⁵⁰ it cannot explain why the required minimum functionality requirement alone would not suffice to alleviate the lowest common denominator concern. Indeed, this document suggests that the restrictive conditions were actually designed specifically to reduce the likelihood that advertisers would extend their campaigns to rival search networks.⁵⁵¹

In sum, the effects of these restrictive conditions, combined, have the tendency to preserve and enhance Google's dominant position in the search advertising market. Unjustified by any procompetitive benefits, we believe that Google's restrictive conditions should be condemned by the Commission.⁵⁵²

4. Google's Exclusive and Restrictive Syndication Agreements

Staff has investigated whether Google has entered into anticompetitive, exclusionary agreements with websites for syndicated search and search advertising services (AdSense agreements) that serve to maintain, preserve, or enhance Google's monopoly power in the markets for search, search advertising, or search and search advertising syndication (search intermediation). We conclude that these agreements violate Section 2.

a. Google's Agreements Foreclose a Substantial Portion of the Relevant Market

Exclusive deals by a monopolist harm competition by foreclosing rivals from needed relationships with distributors, suppliers, or end users. For example, in *Microsoft*, then-defendant Microsoft's exclusive agreements with original equipment manufacturers and software vendors were deemed anticompetitive where they were found to prevent third parties from installing rival browser Netscape, thus foreclosing Netscape from the most

efficient distribution channel, and helping Microsoft to preserve its operating system monopoly.⁵⁵³ The fact that an agreement is not explicitly exclusive does not preclude a finding of liability.⁵⁵⁴

The *Microsoft* decision instructs that the plaintiff is required to establish “a significant degree of foreclosure.”⁵⁵⁵ The competitive effects analysis for exclusive dealing under Section 2 is similar to the analysis under Section 1. Under both Section 1 and Section 2, in order to determine the anticompetitive effects of exclusive agreements, courts consider the percentage of the market foreclosed to competitors and the duration of the foreclosure.⁵⁵⁶ However, a smaller degree of foreclosure may be sufficient to condemn an exclusive agreement under Section 2. In *Microsoft*, the D.C. Circuit noted that:

[While] basic prudential concerns relevant to §§ 1 and 2 are admittedly the same ... we agree with plaintiffs that a monopolist’s use of exclusive contracts, in certain circumstances, may give rise to a § 2 violation even though the contracts foreclose less than the roughly 40% or 50% share usually required in order to establish a § 1 violation.⁵⁵⁷

Foreclosure percentage is properly defined as the percentage of a market subject to the exclusive dealing arrangement in question. However, the case law suggests several different ways to calculate foreclosure percentages. In *Omega Environmental, Inc. v. Gilbarco Inc.*, the Ninth Circuit held that foreclosure was accurately described in quantitative terms as the overall market share subject to the defendant’s exclusive arrangements.⁵⁵⁸ In the alternative, foreclosure could be defined as the percentage of distribution outlets unavailable to rivals.⁵⁵⁹

Here, under either formulation, the likely foreclosure by Google’s exclusive dealing arrangements appears sufficient to support a monopolization claim under Section 2.⁵⁶⁰ In calculating foreclosure numbers, Staff has relied on the ComScore dataset, which is a third-

party dataset routinely used in the industry to analyze query volumes and market shares.⁵⁶¹

As noted earlier, however, in a company data set provided by Microsoft, Yahoo!'s syndicated query volume is significantly higher than that reflected in ComScore.⁵⁶² Reliance on the larger figure would clearly result in a dramatically lower foreclosure number for Google's agreements. We are trying to get to the bottom of this discrepancy now. However, based on our broader understanding of the market, we believe that the ComScore set more accurately reflects the relative query shares of each party.⁵⁶³

Below, Staff lays out three scenarios: the most conservative foreclosure scenario; the most aggressive foreclosure scenario; and the "intermediate" – or most likely defensible – foreclosure scenario. In our most conservative estimate, the foreclosure rate is approximately 20 percent.⁵⁶⁴ In our most aggressive estimate, the foreclosure rate is approximately 66 percent.⁵⁶⁵ In the "intermediate" scenario, the foreclosure rate is approximately 52 percent.⁵⁶⁶

Obviously, given the limitations of the various datasets, the calculated foreclosure rates are of limited value. Nevertheless, it is clear that Google has tied up a substantial portion of this distribution channel with exclusive and restrictive agreements. In the market for search syndication, Google has exclusive or restrictive agreements with 12 of the top 20 companies (60 percent) and 4 of the top 5 (80 percent). The 20 largest companies account for 94 percent of total query volume.⁵⁶⁷ Courts have found that foreclosing rivals from the most efficient means of distribution can be especially problematic.⁵⁶⁸ Access to these largest players is by far the most efficient method for Bing to gain query volume in the syndication channel.⁵⁶⁹

b. Google's Agreements Have Resulted In Anticompetitive Effects

Measuring foreclosure is merely the first step in assessing competitive effects in an exclusive dealing case. Once we establish that foreclosure is above so-called "safe harbor" levels, we still must undertake a qualitative, rule of reason analysis of actual market effects.⁵⁷⁰ There are two potential anticompetitive effects flowing from Google's exclusive agreements with publishers. The agreements may impact both the immediate market for search and search advertising syndication, and also have broader effects in the markets for search and search advertising.

We turn first to the search and search advertising syndication (search intermediation) market. There, our investigation shows that the exclusivity provisions are precluding at least some of the largest and most sophisticated publishers from using competing platforms for a subset of their syndication needs. This also means those publishers cannot credibly threaten to shift some incremental business to other platforms in order to wring price concessions from Google.

In light of the fact that Google is aggressively reducing revenue shares to its customers without significant resistance today, the exclusive agreements appear to be having the effect of further entrenching Google's monopoly position in the market for search and search advertising syndication, and facilitating Google's maintenance of monopoly power in the market for search advertising.

One might object to this argument by noting that Google is holding onto its business with most of these publishers mainly because its product is so superior to the other offerings available today. This argument is further bolstered by the fact that a substantial majority of

the publishers we interviewed did not object to exclusivity because they wanted to use Google for all their search syndication needs anyway.

Our investigation indicates that this objection rests on a fallacious assumption: namely, that Bing's *average* monetization gap is derived from its *consistent* failings across-the-board. If, instead, that overall average is derived from sources of differing quality, that means Bing actually does have opportunities to pick off incremental business from Google in those areas where the monetization gap is lower, particularly where it can make up for some of its monetization deficiencies by offering higher revenue shares. Evidence from Microsoft indicates that there is indeed heterogeneity in the quality of its search advertising product, with comparative strength in certain commercial categories, such as travel and people (social) search.⁵⁷¹

Given this state of affairs, one likely path for Bing to win new syndication business is precisely the one blocked by the exclusivity provisions in Google's syndication agreements. All the publishers that expressed interest in using Bing told us that they want to split up their business, giving Bing opportunities where it can compete, and relying on Google for the balance of their needs.

In addition to the immediate impact on Bing, our investigation suggests that specialty search advertising platforms may emerge in the absence of Google's exclusivity provisions. For example, IAC's CityGrid property sought to build its own advertising platform to serve advertising targeted to local markets.⁵⁷² CityGrid monetizes its websites through local ads from small "mom and pop" stores, medium-sized businesses, and large chains that are trying to gain local customers.⁵⁷³ CityGrid decided that it wanted to build its own advertising network rather than "put all [its] eggs in one basket" by going with Google exclusively.⁵⁷⁴

CityGrid would like to provide a niche competitive alternative to Google's AdSense network, but it is hampered by Google's exclusivity provisions. The exclusivity provisions prevent CityGrid from winning prominent placement on the publisher websites where its local advertisements would be most effective. Due to these challenges, CityGrid is having only modest success, and has struggled to attract both advertisers and publishers willing to use an alternative platform.⁵⁷⁵ It is unclear whether smaller search advertising networks like CityGrid can ultimately emerge (and thrive) in the absence of exclusivity, but CityGrid's experience suggests that nascent competition may be suppressed by Google's exclusivity provisions.

The exclusivity provisions also have broader effects in the markets for search and search advertising. Microsoft argues that the intent – and the ultimate effect – of Google's restrictive syndication agreements is to prevent Microsoft from achieving the necessary scale to compete effectively against Google.⁵⁷⁶ Microsoft reports that it could substantially benefit from serving a portion of the query and advertising volume from some of Google's largest syndication customers.⁵⁷⁷ As noted above, a small number of the largest and most sophisticated customers believe they could benefit from contracting with Bing for some parts of their syndication business and would likely do so in the absence of exclusivity provisions in their Google contract.

It is difficult to predict whether removing exclusivity would enable Bing to win enough traffic through new search syndication deals to meaningfully improve its overall search product. Google argues that the scale effects resulting from Microsoft winning some incremental syndication query traffic would be trivial,⁵⁷⁸ while Microsoft asserts that even a

5 to 10 percent increase in its overall query traffic would be “very meaningful” because Bing is at the lower part of the scale curve where “each percentage point is critical.”⁵⁷⁹

While there is not enough evidence on this point to reach definitive conclusions, internal Google documents suggest that Microsoft’s view of things may be closer to the truth. Google’s interest in renewing deals with some of its largest syndication customers may have been, in part, to keep Microsoft from gaining scale. For example, an internal Google analysis of the 2010 AOL renewal explains:

AOL holds marginal search share but represents scale gains for a Microsoft + Yahoo! partnership. . . . AOL/Microsoft combination has modest impact on market dynamics, but material increase in scale of Microsoft’s search & ads platform.⁵⁸⁰

When a senior Google executive was informed that “Microsoft [is] aggressively wooing AOL with large guarantees,” he responded that:

I think the worse case scenario here is that AOL users get sent to Bing, so even if we make AOL a bit more competitive relative to Google, that seems preferable to growing Bing.⁵⁸¹

According to Google documents, the company sought to pursue the AOL deal aggressively even though AOL represented “[a] low/no profit partnership for Google. . . .”⁵⁸²

While the evidence summarized above is consistent with the theory that these exclusive dealing arrangements are creating anticompetitive effects, there are nevertheless some significant limitations in this evidence. Perhaps our biggest concern is that, today, so few publishers are actively interested in using multiple suppliers. As noted earlier, we have identified only three companies that are subject to the exclusivity or “preferred placement” provisions today and clearly voicing unambiguous concerns: eBay, NexTag, and Business.com. In addition to these three companies, Amazon is not foreclosed today, but voiced very similar concerns and is very worried that it may be subject to exclusivity in the

future, and so likely would support the views of the three foreclosed companies that are actively complaining. Finally, IAC is among those companies foreclosed today, and has previously voiced strong concerns, but in its most recent discussion with Staff, appeared to back away from some of those concerns.

None of the complaining companies told us they would shift large segments of their existing business with Google to Microsoft if exclusivity were lifted. The complainants all confirm that Microsoft's product monetizes at a much lower average rate than Google's, so they are only likely to shift a modest percentage of their available business to Microsoft.⁵⁸³ The best real world evidence we have as to what using multiple providers will look like comes from Amazon, which is the only company that is currently using both Google and Microsoft for search syndication. Microsoft represents just 3.4 percent of Amazon's worldwide search syndication revenue, because, at present, Microsoft monetizes so poorly in relation to Google.⁵⁸⁴

At least in the near-term, this evidence suggests that the effects of removing exclusivity are not going to be dramatic. Rather, it appears that a subset of the largest and most sophisticated publishers will opportunistically shift modest amounts of their available traffic to Bing. The less sophisticated publishers appear likely to continue using Google exclusively because Google's product is better, they perceive that there are technical barriers or other problems associated with using multiple suppliers, or some combination of these issues.

More significant competitive benefits may be realized over a longer period of time. Removing exclusivity may open up additional opportunities for both established and nascent competitors, and those opportunities may spur more significant changes in the market

dynamics as publishers have the opportunity to consider – and test – alternatives to Google’s AdSense program. While the speed and strength of these long-term improvements cannot be accurately forecast today, this is a situation where the near-term competitive impacts may be overshadowed by the long-term improvements, as competitive forces are unleashed and additional dynamism emerges.

c. Google’s Agreements Are Not Justified By Efficiencies

Google has offered three business justifications for its exclusive and restrictive syndication agreements with publishers. First, Google notes that there is a long-standing industry practice in favor of exclusivity dating from the time when the publishers demanded large, guaranteed revenue share payments regardless of actual performance. However, guaranteed revenue shares are now virtually non-existent.

A second, and related, justification is that Google is simply engaging in a vigorous competition with Microsoft for exclusive agreements. Although Microsoft asserts that it would like the opportunity to compete on a non-exclusive basis (and will happily serve even a small portion of a website publisher’s queries), some publishers report that Microsoft itself sought various forms of exclusivity in contract negotiations.⁵⁸⁵ Moreover, while Microsoft has aggressively pursued some very large website publishers, it appears that Microsoft is not generally pursuing the broader syndication business today.⁵⁸⁶ Google may argue that the fact that Microsoft is losing in a competitive bidding process (and indeed, not competing as vigorously as it might otherwise) is not a basis on which to condemn Google. However, Google has effectively created the rules of today’s game, and Microsoft’s substantial monetization disadvantage puts it in a poor competition position to compete on an all-or-nothing basis.

The third justification Google has offered is “user confusion.” Google claims that it does not want users to confuse a competitor’s poor advertisements with its own higher quality advertisements. This argument suffers both from the fact that it is highly unlikely that users care about the source of the ad, as well as the fact that, if users *did* care, less restrictive alternatives are clearly available. Google has not explained why alternatives such as labeling competitor advertisements as originating from the competitor are unavailing here.

Indeed, Google’s actions demonstrate that “user confusion” is not a significant concern. In 2008 Google attempted to enter into a non-exclusive agreement with Yahoo! to supplement Yahoo!’s search advertising platform. Under the proposed agreement, Yahoo! would return its own search advertising, but supplement its inventory with Google search advertisements when Yahoo! did not have sufficient inventory.⁵⁸⁷ Additionally, Google has recently eliminated its “preferred placement” restriction for its online partners.⁵⁸⁸

In sum, a rule of reason analysis of the exclusivity provisions shows strong evidence of a relevant market protected by high entry barriers. There are some significant data limitations associated with calculating foreclosure accurately here, but it appears the level of foreclosure is likely modestly above the minimum level necessary to support a finding of competitive injury. At least some customers are being precluded from using Bing due to the exclusivity provisions of their agreements with Google. The procompetitive justifications for this conduct appear fairly insubstantial, although Microsoft’s efforts to impose exclusivity will complicate our proof on that issue. However, there are not pervasive anticompetitive effects throughout the market, which will bolster the criticism that the putative anticompetitive effects here are too speculative to be cognizable in the context of an antitrust claim.

While we acknowledge the limited effects here, it is worth noting that the market for search and search advertising syndication is, inarguably, not robustly competitive today. Google has been unilaterally reducing revenue share percentages to many of its syndication customers (in effect raising prices) with apparent impunity.⁵⁸⁹ One of the largest customers, Amazon, decided that it is in its long-term, strategic interest to funnel some query volume to Bing, even if it is losing money on each query.⁵⁹⁰ Amazon is using multiple suppliers just to try to foster a more competitive marketplace.⁵⁹¹ Where markets are functioning so poorly, the rationale for government intervention is stronger, even in situations where the near-term competitive harm directly attributable to the challenged conduct may be small. Although this conduct presents a closer question, we believe that Google's exclusive and restrictive agreements have not only helped to maintain, preserve, and enhance Google's monopoly power in the market for search and search advertising syndication (search intermediation), but also in the underlying markets for search and search advertising. Therefore, we believe that the Commission should condemn Google's exclusive and restrictive syndication agreements.

IV. POTENTIAL REMEDIES

Staff has identified several possible remedies to Google's conduct. These remedies are described below.

A. Scraping

There are at least two possible remedies for Google's scraping conduct. *First*, Google could be required to provide an "opt-out" feature to remove "snippets" of website content (e.g., user reviews, ratings) from Google's vertical properties, but retain those

snippets in Google's web search results and/or in its Universal Search results on the main SERP.⁵⁹²

Second, Google could be required to limit the use of content it indexes for its web search results (*i.e.*, Google can only use the content in returning the property in its natural search results, but not in determining its own product or local rankings), unless given express permission to use it for other purposes. This remedy could address Google's less obvious "scraping" of third-party product and ranking information in order to determine its own product collection and rankings.

B. API Restrictions

The most appropriate remedy for Google's API restrictions is to require Google to remove the problematic contractual restrictions from its API license.⁵⁹³ No technical fixes would have to be undertaken to allow for full compatibility among the various search advertising platforms. Indeed, SEMs report that innovative technology for this cross-compatibility already exists, and, if left unhindered by Google's contractual restraints, will quickly flourish.⁵⁹⁴

C. Exclusive and Restrictive Syndication Agreements

The most appropriate remedy for Google's exclusive and restrictive syndication agreements is to enjoin Google from entering into exclusive agreements with its search syndication partners, as well as to require Google to substantially loosen restrictions surrounding AdSense partners' use of rival search advertisements. As described above, a small, but significant, group of Google's AdSense partners have indicated that they would like to supplement their websites with Microsoft's search advertisements. The number of

partners considering alternatives to AdSense may grow in the event that these agreements are enjoined.⁵⁹⁵

V. LITIGATION RISKS

We have identified throughout this memorandum the many substantial risks associated with bringing a case against Google. On a global level, the record will permit Google to show substantial innovation, intense competition from Microsoft and others, and speculative long-run harm. Here, we highlight some specific facts that present the greatest litigation risk:

1. “Competition is just one click away.”⁵⁹⁶ Google does not charge consumers, and they are not locked into Google. The durability of Google’s monopoly power is questionable with an increasing number of websites (*e.g.*, Facebook, Twitter) competing for user time and advertiser dollars.
2. Universal Search is a “product improvement” that has resulted in substantial benefit to its users.
3. Google’s organization and aggregation of content from other websites adds value to the product for consumers.
4. The largest advertisers (that produce the most revenue on Google’s AdWords platform and Microsoft’s AdCenter platform) already advertise on both AdWords and AdCenter.
5. The most efficient channel through which Bing can gain scale is Bing.com, not syndication or other distribution channels.

6. Microsoft has the resources to purchase distribution where it sees the greatest value (*e.g.*, OEM channels). For Microsoft, other distribution channels clearly represent a viable substitute for query volume in syndication channels.
7. Most website publishers are happy with Google's AdSense services, and do not want to switch even part of their supply to Microsoft.

VI. CONCLUSION

Staff concludes that Google's conduct has resulted – and will result – in real harm to consumers and to innovation in the online search and advertising markets. Google has strengthened its monopolies over search and search advertising through anticompetitive means, and has forestalled competitors' and would-be competitors' ability to challenge those monopolies, and this will have lasting negative effects on consumer welfare. Specifically, Staff believes that:

1. Google has unlawfully maintained its monopoly over general search and search advertising, in violation of Section 2, or otherwise engaged in unfair methods of competition, in violation of Section 5, by scraping content from rival vertical websites in order to improve its own product offerings.
2. Google has unlawfully maintained its monopoly over general search, search advertising, and search syndication, in violation of Section 2, or otherwise engaged in unfair methods of competition, in violation of Section 5, by entering into exclusive and highly restrictive agreements with web publishers that prevent publishers from displaying competing search results or search advertisements.
3. Google has unlawfully maintained its monopoly over general search and search advertising, in violation of Section 2, or otherwise engaged in unfair methods of competition, in violation of Section 5, by maintaining contractual restrictions that inhibit the cross-platform management of advertising campaigns.

For the reasons set forth above, Staff recommends that the Commission issue the attached complaint.

Respectfully submitted,



Barbara R. Blank

APPROVED:



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¹ See Google Inc., File No. 111-0163, Resolution Authorizing Use of Compulsory Process in Nonpublic Investigation (Jun. 13, 2011).

² In total, the Commission has issued 20 subpoenas (to Google, Microsoft, Yahoo!, Amazon, eBay, NexTag, TheFind, Living Social, Yelp, Apple, Motorola Mobility, Samsung, Sony, Toshiba, LG Display, RIM, AT&T, Sprint Nextel, T-Mobile, and Verizon) and two voluntary access letters (to Expedia and Trip Advisor).

³ The investigational hearing of CEO and co-founder Larry Page, originally scheduled for Jun. 29, has been delayed indefinitely due to the illness of Mr. Page. Staff's last scheduled investigational hearing of a Google executive, Andy Rubin (Android founder and head of Google's Android division), is slated for Aug. 23.

⁴ Letter from Joaquin Almunia, Vice-President of the European Commission, to Eric Schmidt, Google, dated May 21, 2012 (copy of the letter is on file with Staff).

⁵ *Id.*

⁶ See Discussion Paper Submitted by Google on The Preliminary Concerns Identified by the European Commission and Google's Proposed Solution, attachment to Letter from Maurits Dolmans et al., Cleary Gottlieb Steen & Hamilton LLP, to Cecilio Madero Villarejo, Deputy Director General, European Commission (Jun. 30, 2012) ("Google-EC Settlement Proposal").

⁷ The State of Mississippi is also conducting a separate investigation into Google, but is not working with the multi-state group or with the Commission. The Commission declined to grant access to Mississippi due to the state's retainer of an outside law firm to conduct the investigation and the multi-state group's denial of access (on the same basis).

⁸ The states have jointly retained economist Rick Flyer as a consulting expert and, potentially, as a testifying expert.

⁹ *Kinderstart.com LLC v. Google, Inc.*, 2006 U.S. Dist. LEXIS 82481, (N.D. Cal. Jul. 13, 2006); *Search King, Inc. v. Google Tech., Inc.*, 2003 U.S. Dist. LEXIS 27193, (W.D. Okla. May 27, 2003).

¹⁰ *Person v. Google, Inc.*, 2007 U.S. Dist. LEXIS 47920, (N.D. Cal. Jun. 25, 2007); *Google, Inc. v. myTriggers.com, Inc.*, Franklin County Ohio Civil Division Case No. 09cvh10-14836 (Aug. 31, 2011); *TradeComet.com, LLC v. Google, Inc.*, 693 F. Supp. 2d 370, 378 (S.D.N.Y. 2010) (*aff'd*, *TradeComet.com LLC v. Google, Inc.*, 647 F.3d 472, 478 (2nd Cir. 2011)).

¹¹ 2006 U.S. Dist. LEXIS 82481, (N.D. Cal. Jul. 13, 2006).

¹² 2003 U.S. Dist. LEXIS 27193, *2 (W.D. Okla. May 27, 2003).

¹³ *Id.*

¹⁴ *Kinderstart.com*, 2006 U.S. Dist. LEXIS at *28.

¹⁵ 693 F. Supp. 2d 370, 378 (S.D.N.Y. 2010).

¹⁶ Case No. 09cvh10-14836 (Franklin County Ohio Civil Division, Aug. 31, 2011).

¹⁷ 2006 U.S. Dist. Ct. Pleadings 7297, *3 (N.D. Cal. Apr. 16, 2007).

¹⁸ *Id.* at *10.

¹⁹ *Person v. Google, Inc.*, 346 Fed. Appx. 230, 231 (9th Cir. 2009).

²⁰ Google owns and operates numerous websites, including: Google Alerts; Books; Finance; Gmail; Images; Maps; News; Google Plus; Product Search; and YouTube.

²¹ In a separate investigation, opened in Apr. 2012, FTC Staff is investigating whether Google violated commitments to various standard-setting organizations to license standard essential patents used in the mobile industry on fair, reasonable, and non-discriminatory terms. See Google-Motorola, File No. 121-0120, Resolution Authorizing Use of Compulsory Process in Nonpublic Investigation (May 25, 2012).

²² Google FY 2012 Form 10-K (Jan. 26, 2012), at 29, available at http://sec.gov/Archives/edgar/data/1288776/000119312512025336/d260164d10k.htm#toc260164_8. ("Google 2012 10K").

²³ *Id.* at 25.

²⁴ Press Release, Microsoft Corp., MSN Significantly Upgrades MSN Search for Consumers with Major Performance and Relevancy Improvements (Jun. 30, 2004)

<http://www.microsoft.com/presspass/press/2004/jun04/06-30ImprovedSearch2004PR.mspix>.

²⁵ Press Release, Microsoft Corp., Microsoft's New Search at Bing.com Helps People Make Better Decisions (May 28, 2009) <http://www.microsoft.com/presspass/press/2009/may09/05-28NewSearchPR.mspix>.

²⁶ See Microsoft Corp., Complaint to the European Commission (Mar. 31, 2011) ("Microsoft EC Submission").

²⁷ See Yahoo! Inc., FY 2010 Form 10-K (Feb. 28, 2011), at 3, *available at* <http://files.shareholder.com/downloads/YHOO/1261814235x0xS1193125-11-50000/1011006/filing.pdf> (“Yahoo! 2010 10K”).

²⁸ Microsoft IR (Jun. 11, 2012).

²⁹ *Id.* Yahoo! modifies Bing’s search results by adding its own vertical content to Bing’s feed. *Id.* at 2.

³⁰ See Microsoft IR (Jun. 11, 2012). Pursuant to the arrangement, advertisers buy joint placement on both the AdCenter (Microsoft) and Panama (Yahoo!) platform. Microsoft serves the ads on both search engines, while Yahoo! maintains the “front end” sales force, and services most of the customers. Yahoo! also determines the number of ads it wants to feature on its own search results page. *Id.*

³¹ Somini Sengupta, *Facebook’s Prospects May Rest on Trove of Data*, New York Times, May 14, 2012, *available at*, <http://www.nytimes.com/2012/05/15/technology/facebook-needs-to-turn-data-trove-into-investor-gold.html>.

³² Microsoft estimates that the Internet has grown from approximately 200 million pages in 1997 to between 5 and 20 trillion web pages today. Susan Athey, “Scale in Online Search” (Mar. 10, 2012), at 11.

³³ For example, product comparison shopping websites only recognize queries that include product names, and only return online product information, but not *news* regarding products or links to manuals for products. Similarly, flight search websites require users to enter origination and destination information, and only return flight (and, in some cases, hotel) information, not general information regarding the destination.

³⁴ Schmidt Tr. 125:21-126:9 (“there’s a significant benefit of ROI of online over offline. Significant, I mean quantifiable, real, and so forth. . . If you’re going to found a business today; put all your money in online. . . and then think about traditional advertising, marketing.”); *id.* at 147:9-15 (“If the advertisers were being perfectly efficient, they would not do any offline advertising until all the opportunities for online advertising were exhausted.”).

³⁵ Schmidt Tr. 155:15-156:4; **GOOG-ITA-13-0000962-86** (2008), at 70 (Q308 Earnings Call, describing search advertising as “our core business”).

³⁶ See Google FY 2012 Form 10-K, at 26; Eric Schonfeld, *Larry Page: Display Advertising is a \$5 Billion Business*, Techcrunch, Jan. 19, 2012, <http://techcrunch.com/2012/01/19/larry-page-display-5-billion/>. (reporting that Larry Page attributed \$1.25 billion of \$10.6 billion in one quarter’s ad revenue to display).

³⁷ **CX-123 (GOOGFOX-000055480-89)** (2010), at 85 (Google, Inc. Citi Technology Conference, Sep. 8, 2010, interview with Nick Fox); **GOOG-ITA_20_0165245-55** (2010), at 45 (“Google’s advertising systems have contributed over \$53 billion in economic value.”).

³⁸ Schmidt Tr. (Google-Yahoo, 2008), at 90:8-12 (“So if you have a choice of advertising, you would choose Google first, because it’s the one we believe . . . has the most effective tool for reaching the customers that are actually prepared to buy.”); Fox Tr. (Google-Yahoo, 2008), at 45:1-47:12; EAS IR (Feb. 23, 2012); **FTCNext-00000002** (2012), at 36; **FTC-EXPE-00000002** (2012), at 16; Kenshoo IR (Nov. 9, 2011); *see also* Robert Bork, *Antitrust and Google*, Chicago Tribune, Apr. 16, 2012, *available at*, http://articles.chicagotribune.com/2012-04-06/news/ct-perspec-0405-bork-20120406_1_unpaid-search-results-search-engines-search-algorithms. (“Search engines support themselves by selling advertising, much like newspapers, free TV or free radio, except that the search engines are much more efficient.”).

³⁹ **FTC-EXPE-00000002** (2012), at 16; **FTCNext-00000002** (2012), at 36; **FTC-EBAY-00000002** (2012), at 31.

⁴⁰ *See, e.g.*, **CX-114 (GOOGFOX-000128621-22)** (2009), at 62; **GOOG-ITA-20-0165245-55** (2010), at 45 (“Because AdWords, unlike other media, starts with the consumer’s intention in mind, the product has been remarkably effective.”); Comcast IR (Nov. 15, 2011) (particularly easy to track the effectiveness of search advertising because it has such a close proximity to the point of sale.); Schmidt Tr. (Google-Yahoo, 2008), at 90:5-91:16 (compared to all advertising, “we believe [Google has] the highest quality [advertising]”). *See also* Amazon CID Response (2012), at 38; Living Social CID Response (2012), at 16-17.

⁴¹ Interpublic IR (Oct. 20, 2011); Resolution Media IR (Nov. 7, 2011); **FTCNext-00000002** (2012), at 36; **FTC-EBAY-00000002** (2012), at 31.

⁴² *See* Statement of Federal Trade Comm’n Concerning Google/DoubleClick, FTC File No. 071-0170 (2007), at 5, 7. *See also, e.g.*, Interpublic IR (Oct. 20, 2011); Havas IR (Oct. 5, 2011). For this reason, display advertising is generally not viewed to be as effective or valuable as search advertising. *See, e.g.*, Apollo Group IR (Jan. 4, 2012) (search advertising is 1.5 to 2 times as effective as other ad options).

⁴³ Varian Tr. 88:16-89:7 (“Brand perception is driven to some extent by other [non-search] forms of advertising . . . We know, for example, that display ads drive brand; brand drives clicks”); Schmidt Tr. 130:18-21 (a brand advertisement would be a Coca-Cola advertisement that is not trying to get you to buy a Coke, but trying to get you to *think* about Coke); Wal-Mart IR (Jan. 23, 2012); Fox Studios IR (Jan. 20, 2012); Verizon IR (Nov. 1, 2011); EAS IR (Feb. 23, 2012).

⁴⁴ See Statement of Federal Trade Comm’n Concerning Google/DoubleClick, FTC File No. 071-0170 (2007), at 5. See also Interpublic IR (Oct. 20, 2011); Didit.com IR (Dec. 27, 2011).

⁴⁵ Contextual ads are somewhat more successful at creating conversions than direct display ads, but less successful than search. Contextual advertising is considered a closer substitute for display advertising than for search advertising in terms of function and performance. See, e.g., Group M IR (Oct. 11, 2011); Expedia IR (Jan. 23, 2012). See also, e.g., **GOOG-ITA-03-0045511-17** (2009), at 16 (“content conversions do not lead to sales like search conversions”); Brin Tr. 181:1-8 (“the conversions are different. The click-through is also different So between the two of those, your average content page view is worth significantly less than your average search page, no question about it”).

⁴⁶ See Didit.com IR (Dec. 27, 2011); **GOOGFOX-000073028** (2008), at 14. “Re-targeting” means serving ads to users that have abandoned purchases before completed, or who have visited certain websites in the past. Like search, this type of ad is meant to elicit a direct response, but – unlike search ads – re-targeted ads are not shown in response to a user’s declared intent. Clickable IR (Oct. 24, 2011) (re-targeted display advertising requires advertisers to act on behavioral calculations and inferences from large troves of data, and does not generate leads or sales as well as search advertising).

⁴⁷ See Didit.com IR (Dec. 27, 2011); Wal-Mart IR (Jan. 23, 2012). Social media advertising appears to be more like display advertising in that it offers a large volume of impressions, but relatively few conversions. See Facebook IR (Jul. 1, 2011); Facebook IR (Jan. 24, 2012). See also Matt Lawson, *How to Integrate Search and Social Media for Better Results*, Mashable, Apr. 1, 2010, <http://mashable.com/2010/04/01/paid-search-social-media/> (Director of marketing for Marin Software discussing how to develop and integrate paid search and social media advertising strategies; social and search advertising are “two distinctly different tactics – the bid-based, conversion-obsessed, ROI-driven world of paid search and the experimental, brand-building, hard-to-measure world of social . . . each provide different benefits to your business, so you should leverage their strengths instead of trying to get them to deliver results that aren’t suited to the medium. Marketers usually participate in social media to create an active dialogue with consumers around their products and services, with the main goal of building brand value, and a secondary goal of driving sales. On the other hand, marketers use paid search primarily to drive sales, leads, and conversions, and don’t expect the short text of their paid search ads to do much for branding”).

⁴⁸ Contextual advertising is limited by the amount of advertising space available on web pages addressing any given topic, in which relevant ads can then be served. Re-targeted (or behavioral) advertising is limited by the number of “cookies” users allow to be placed on their computers (and on how often those cookies are erased), and also requires guesswork and heavy analysis on the part of the advertiser. See **GOOGFOX-000073028** (2008), at 13; Interpublic IR (Oct. 20, 2011); **FTC-EBAY-00000002** (2012), at 31 (eBay and Shopping.com spent an “insignificant” amount on contextual advertising). **FTCNext-00000002** (2012), at 36 (non-search advertising cannot replace search advertising). Social media is still a maturing market, which remains quite small. Moreover, neither Facebook nor Twitter has been very successful in generating conversions, despite the information they have available on the interests of their users (see Facebook IR (Jul. 1, 2011; Jan. 24, 2012); Twitter IR (Dec. 13, 2011)), and both Living Social and General Motors have pulled the majority of their social media budgets based on a failure to achieve acceptable conversion rates. See Living Social CID Response (2012), at 17; Joan Muller, *GM Says Facebook Ads Don’t Work, Pulls \$10 Million Account*, Forbes, May 15, 2012, available at <http://www.forbes.com/sites/joannmuller/2012/05/15/gm-says-facebook-ads-dont-work-pulls-10-million-account/>.

⁴⁹ Braddi Tr. 11:22-12:2.

⁵⁰ *Id.* at 26:8-27:8.

⁵¹ Staff continues to investigate Google’s conduct in the mobile arena, and will address these issues in a supplemental memorandum.

⁵² Google purchased the Android business in 2005.

⁵³ Since Google’s release of the first commercially available mobile device running Android OS in October 2008, Android’s market share has grown exponentially. In Sep. 2009, Apple garnered 24.1 percent share of

U.S. mobile subscribers, compared with Android's 2.5 percent. By Nov. 2010, Android's market share of 26 percent had surpassed Apple's 25 percent share. By Apr. 2012, Android enjoyed slightly more than 50 percent share, while Apple's share was 31.4 percent. Apple's market share appears to be plateauing, while Android's share continues to skyrocket, having successfully cannibalized RIM's rapidly declining base. *See* Press Release, comScore, comScore Reports December 2009, U.S. Mobile Subscriber Market Share (Feb. 8, 2010) [http://www.comscore.com/Press Events/Press Releases/2010/2/comScore Reports December 2009 U.S. Mobile Subscriber Market Share](http://www.comscore.com/Press%20Events/Press%20Releases/2010/2/comScore%20Reports%20December%202009%20U.S.%20Mobile%20Subscriber%20Market%20Share); Press Release, comScore, comScore Reports November 2010 U.S. Mobile Subscriber Market Share (Jan. 6, 2011) [http://www.comscore.com/Press Events/Press Releases/2011/1/comScore Reports November 2010 U.S. Mobile Subscriber Market Share](http://www.comscore.com/Press%20Events/Press%20Releases/2011/1/comScore%20Reports%20November%202010%20U.S.%20Mobile%20Subscriber%20Market%20Share); Press Release, comScore, comScore Reports, April 2012, U.S. Mobile Subscriber Market Share (Jun. 1, 2012) [http://www.comscore.com/Press Events/Press Releases/2012/6/comScore Reports April 2012 U.S. Mobile Subscriber Market Share](http://www.comscore.com/Press%20Events/Press%20Releases/2012/6/comScore%20Reports%20April%202012%20U.S.%20Mobile%20Subscriber%20Market%20Share).

⁵⁴ *See* Brin Tr. 161:24-162:3 ("Having more queries would definitely help you with . . . tail queries, which are more rare, no question about it"); Schmidt Tr. 27:7-13 ("there's some way in which long tail queries benefit our ranking. I don't fully understand, but – but there's some aspect where we look at the long tail query use"); *id.* at 39:11-19 ("I do . . . agree that scale is important to the long [tail]"); Manber Tr. 117:1-3 (Google has been able to improve tail queries "the most" over time). Microsoft argues – and Google appears to agree – that it is the answers to these more difficult and unusual queries that keep users satisfied (and coming back to a search engine). *See* Manber Tr. 111:4-8 ("And the one thing to understand about search if you really want to know one thing about search is the tail is everything. . . . It's mostly about the tail"); Schmidt Tr. 25:15-19 ("We would argue that we're particularly good in the long tail query department, that that was one of the, one of the benefits of Google over the – you know, just better, better than anybody else"). *See also, e.g.,* **GOOG-Texas-1325832-33** (2010), at 32 ("Our long-tail precision is why users continue to come to Google. Users may try the bells and whistles of Bing and other competitors, but Google still produces the best results."); **CX-137 (GOOGSCHM-000002716)** (2009) ("Since [Bing doesn't] have scale in queries they are not good in the long tail yet. . . . Not yet a threat to Google in the near term, but[] opens a new front against us."). A recent study conducted by Microsoft suggests that users are twice as likely to switch away from Bing for "tail" (or less frequent) queries than for "head" (or popular) queries, for which Bing's results are of high quality. The same study notes that, once a user has switched away from Bing, he or she is unlikely to return in the same session, and that Bing loses approximately three percent of its volume to searches by users who switch and do not return in the same session. *See* Microsoft Corp., Keystone Strategy, "Scale Effects in Web Search Results: User Satisfaction and Scale" (Jun. 22, 2012).

⁵⁵ Manber Tr. 124:19-24; 125:18-126:14 (Google reviews user query logs to help determine user intent with misspelled queries); Schmidt Tr. 26:11-27:16 (spelling correction and Google Suggest are examples of features where user queries are valuable to Google); Brin Tr. 142:15-144:9 (same). *See also, e.g.,* **GOOGMANB-000029827-30** (2009), at 27 (Marissa Mayer: "The key issue here as I see it is that you do get better as you have more users – that's why we have the best spell check, the best personalized search, the best refinements, etc. . . ."). Microsoft asserts that Google's access to large volumes of historical data, in particular, give it a significant advantage in spelling correction and suggestions. A study conducted by Microsoft suggests that, where Bing's "spell checker" algorithm was triggered (based on prior similar queries), Bing's performance was far closer to Google's results in terms of quality than where the algorithm was not triggered. Susan Athey, Microsoft, "Scale in Online Search" (Mar. 10, 2012), at 11. Similarly, Microsoft found that its "auto suggest" feature improved substantially from Jul. 2010 to Sep. 2011, based on the addition of Yahoo!'s historical query data into Bing's algorithms, improving user click rates from approximately 44 percent to 61 percent. Susan Athey, Presentation, "The Role of Scale in Competing in Online Search" (Mar. 26, 2012), at 22.

⁵⁶ Susan Athey, "Scale in Online Search" (Mar. 10, 2012), at 12 (noting that Bing relies on, among other things, a "spike in query volume" on a certain topic in order to determine the need for "fresh" results); Microsoft Corp., "Microsoft Response to DG Comp RFI" (Nov. 21, 2011), at 68 (same); Preston McAfee, Presentation, "Scale, Data, and Machine Learning: Solving the Search Problem," (2011), at 5 ("comprehensiveness, freshness, and performance are scale problems").

⁵⁷ Manber Tr. 139:19-140:1. *See id.* at 122:16-123:12 (discussing experiment that removed user click data from Google's NavBoost algorithm, which had a "significant [negative] impact" on search quality).

⁵⁸ See Brin Tr. 142:3-144:9, 169:1-19 (Google tracks user clicks to improve quality, citing early NavBoost algorithm as example of signal that relied heavily on user clicks); Schmidt Tr. 61:17-24 ("So clicks matter in terms of feedback to the people who monitor these things. They say our algorithm needs to be improved"). See also e.g., **GOOGPAGE-000004652** (2008) ("[Click-tracking is] used to track which search results a user selects. That information then feeds back into our search ranking"); **GOOGBRIN-000005558** (2002), at 9 ("Traffic/Quality Effect. The more traffic we generate and usage data we collect, the better our overall [ad] quality."); **GOOGMAYE-000044916-21** (2004), at 18 (Brin notes that "[w]e could take advantage of our scale more. [H]ave 1000 or 10000 people feeding information into our algorithms").

⁵⁹ Manber Tr. 54:5-56:15 (describing various uses for experiments); Declaration of Satya Nadella, Senior Vice President, Online Services Division, Research and Development, In Re Google/ITA (Department of Justice) (2011), at 4 ¶10(d) ("Almost all innovations on the SERP . . . go through a formal experimentation process before they are released, and often there are several rounds of experimentation") ("Nadella Decl.").

⁶⁰ **FTC-0000236-44** (2005), at 38 (2005 Founders' Letter).

⁶¹ Manber Tr. 57:15-23 (when Manber ran the search quality team, Google was running approximately 5,000 experiments a year, or about 15 experiments per day, simultaneously); Brin Tr. 160:2-9 (multiple experiments are run simultaneously, with each typical experiment using approximately one to two percent of total user volume). Microsoft runs approximately ten experiments simultaneously. Microsoft Corp., "Microsoft Response to DG Comp RFI" (Nov. 21, 2011), at 78.

⁶² Susan Athey, "Scale in Online Search" (Mar. 10, 2012), at 10-11; Nadella Decl. at 4 ¶10(d).

⁶³ Susan Athey, "Scale in Online Search" (Mar. 10, 2012), at 10-11 ("Today, Microsoft has relatively few users it can use for experiments and there is a limit to the number of parallel experiments that a single query can be part of without compromising the robustness of the results").

⁶⁴ Microsoft asserts that additional query volume will also help its algorithms to determine what web pages to crawl and index, based on observed user interest of similar web pages. Susan Athey, "Scale in Online Search" (Mar. 10, 2012), at 6-7; Microsoft Corp., "Microsoft Response to DG Comp RFI" (Nov. 21, 2011), at 63 ("Queries are a critical component of the user data necessary to identify and rank URLs and documents for inclusion in a search index"). Moreover, while Bing maintains an index of approximately 43 billion documents (as of November 2011), it "serves" only 16 billion of those documents. The remaining 27 billion web pages have not been clicked on recently enough (if ever) to give Bing's algorithms a sense as to "whether they are suitable" or relevant to user queries. *Id.* at 63. Google served more than 200 billion documents, at last estimate, according to Sergey Brin, who testified that Google reached this point several years ago. Brin Tr. 339:14-23. It does not appear that Google relies on query volume in order to determine what to index. Udi Manber testified that Google indexes everything it can. Manber Tr. 34:24-25.

⁶⁵ **CX-129 (GOOGMANB-000029871-75)** (2009), at 73.

⁶⁶ See Schmidt Tr. 119:24-120:8 (" . . . Think of it this way, advertisers don't put in one ad. They put in a thousand ads against different keywords and different combinations. So if you have a thousand advertisers and a thousand such combinations, you have a million ads that you can choose from. So that's clearly better than having a hundred ads – right – because you can [pick] the one which is – you know, the person who wants camping equipment that's blue in New Hampshire"); Brin Tr. 192:10-14 ("Having a good selection of advertisers to choose from definitely helps having the option of producing a good ad, no question"); *id.* at 193:20-24 (agreeing that having more ads means that Google is more likely to have the right ad for the right user at the right time). See also, e.g., **CX-81 (GOOGROSE-000013304-12)** (2004), at 6 ("More advertisers (and the ads they bring with them) increase overall ads quality by increasing the number of total 'choices.' This is yet another example of a positive feedback and/or scale effect").

⁶⁷ See Schmidt Tr. 73:2-23 ("Having more advertisers fills out your offering. . . . [I]f you have one advertiser, only one, and then the ad is – is – the wrong ad – obviously, more advertisers up to some point of diminishing returns does actually kind of fill out your portfolio"); Wojcicki Tr. 110:16-22 ("Well, I think when we have more advertisers we're able to cover more topics"). See also e.g., **GOOGBRIN-000019771** (undated, c. 2004), at 51 ("More advertisers improves partner monetization: more ads on more queries (coverage, CTR). More competitive auction (CPC). Overall, higher monetization (RPM)").

⁶⁸ See Brin Tr. 171:24-173:6 (Google relies on what ads a user clicks on and how the user engages with the ad to determine whether to show an ad, how to rank the ad, and how to price the ad); Schmidt Tr. 78:13-22 (more ads gives a search engine "more at-bats," or "more opportunities to show that ad"); Wojcicki Tr. 104:17-19, 105:20-106:9 (testifying that "we determine relevance mostly by do we see the users have clicked on these

things in the past,” and that Google’s predicted click-through rate is calculated “based on the previous users that have [clicked] that ad”); Fox Tr. 218:12-219:6 (describing how Google relies on ad clicks and user engagement with ads). *See also* Preston McAfee, Presentation, “Scale, Data, and Machine Learning: Solving the Search Problem” (2011), at 6 (“Click data is used to update click probability on ads”).

⁶⁹ *See* Brin Tr. 195:4-7 (higher quality ads “probably” lead to better conversion rates for advertisers); Amazon IR (Feb. 15, 2012) (larger pool of advertisers improves advertiser performance). Although the definition for “conversion” is not settled – advertisers define “conversions” to mean a number of things, including whether a user stays on a website, makes a purchase, comes back to a website, among other things – Google uses the term “conversion” to refer to some successful occurrence for the advertiser. Brin Tr. 178:4-12.

⁷⁰ *See* Wojcicki Tr. 121:6-12 (“So when we’re able to develop a more relevant ad, that does help the advertiser’s ROI”); Schmidt Tr. 120:16-121:6 (more ads helps to “fill out” a “fully built out set of choices,” which leads to a “fully-monetized ad”). *See also* Amazon IR (Feb. 15, 2012) (larger pool of advertisers improves advertiser performance and leads to more advertiser demand).

⁷¹ *See* Wojcicki Tr. 109:1-14 (“more advertisers means we generate more revenue” to Google because “we have more ads that appear” and “because they bid, they could also increase the auction price because there are more advertisers”); Schmidt Tr. 96:4-97:11 (more advertisers in the auction increases Google’s revenues); Brin Tr. 197:6-199:1 (more advertisers improves Google’s monetization). *See also e.g.*, **GOOGBRIN-000019771** (undated, c. 2004), at 51 (“More advertisers improves partner monetization: more ads on more queries (coverage, CTR); more competitive auction (CPC). Overall, higher monetization (RPM)”); Susan Athey, Presentation, “The Role of Scale in Competing in Online Search” (Mar. 26, 2012), at 7 (chart purporting to demonstrate that, as search query (and, thus, ads) volume increases, a search engine’s RPM increases). Amazon IR (Feb. 15, 2012) (more advertisers lead directly to higher cost-per-click and higher click-through-rates, which improves monetization of search engine). Microsoft calculates Bing’s RPM (revenue per thousand page views) for the current fiscal year (2012) to be approximately \$29. This is up from approximately \$27.36 as of the fourth quarter of 2010. Letter from Jonathan Kanter, Cadwalader, to Barbara Blank, June 25, 2012, at 2. Google’s RPM has varied from \$47.33 in the fourth quarter of 2007 to \$37.99 as of the fourth quarter of 2010. Michael L. Katz et al., “An Economic Analysis of Microsoft’s Allegations that Google’s Conduct Harms Competition by Reducing Bing’s Scale,” at 85 (May 14, 2012). Google calculates its current RPM (as of the fourth quarter of 2011) to be approximately \$43.37. *Id.* at 90-91. These estimates suggest that Google’s RPM has been anywhere from 37 percent to 74 percent higher than Bing’s in the last several years. However, Google asserts that there is no absolute correlation between scale and RPM, noting that, while Google’s query volume has approximately doubled since 2007, its RPM has actually fallen. *Id.* at 93.

⁷² *See* Susan Athey, “Scale in Online Search” (Mar. 10, 2012), at 3-4 (discussing substantial financial investments into search quality; noting that additional scale plays a key role in the recovery of fixed costs, and thus, the disparity between Google and Microsoft’s cost structure, as well as Google’s ability to re-invest into additional improvements); Nadella Decl. at 4 ¶10(e) (“Increased scale allows a search provider to amortize across more queries and search ad revenues the high fixed costs associated with entering the search business,” including some \$4.5 billion in capital investments by Microsoft in 2010).

⁷³ *See* Brin Tr. 197:8-19 (“Having more advertisers would help you do a better job of monetizing publisher sites,” so “having more advertisers would help drive more publishers”); *id.* at 226:21-24 (agreeing with the notion that more users leads to more advertisers, which leads to more syndication partners); Schmidt Tr. 150:23-151:3 (agreeing that large numbers of advertisers lead to higher partner revenues). *See also e.g.*, **GOOGBRIN-000006008** (2002), at 4 (“The more users we have, the more advertisers come, resulting in more syndication partners further driving our user base”).

⁷⁴ *See* Brin Tr. 198:14-15 (“advertisers want [more] publishers. They just want the impressions.”); *id.* at 212:13-15 (in 2002, Google “generally felt that getting a broader base of inventory would attract more advertisers”); Schmidt Tr. 83:21-84:3. *See also e.g.*, **CX-78 (GOOGROSE-000002870)** (2007), at 6 (“The Virtuous User Cycle: . . . Advertisers want access to largest publisher network and vice versa.”); **GOOGBRIN-000005558** (2002), at 6 (“More partners bring more advertisers and higher CPC. More advertisers and higher CPCs brings more partners.”); **GOOGMAYE-000044927-33** (2004), at 28 (“Our Ads network . . . we’ve tapped network-effects that reinforce strength & growth for the largest network (advertisers want the broadest distribution; publishers want the most advertisers/coverage).”).

⁷⁵ *See, e.g.*, **CX-78 (GOOGROSE-000002870)** (2007), at 6 (explaining “The Virtuous User Cycle”); **GOOGBRIN-000049311-12** (2007), at 11 (Brin urges the goal of “driv[ing] the virtuous cycle between

publishers and advertisers”). Cf. **GOOGFOX-000025982-83** (2010), at 82 (noting that recent press article is “premised on the notion that MSFT and Yahoo are not able to take full ad revenue advantage of their search query share, which may be true”).

⁷⁶ See Schmidt Tr. 74:3-8 (agreeing generally with the concept of the “virtuous cycle,” and testifying that “[t]hese are scale business[es]. You want to get to scale. . . . Larger indices; more advertisers; obviously, more revenue; more reach . . . those sorts of things.”); *id.* at 85:8-87:20; Brin Tr. 225:17-227:4 (agreeing generally with the concept of the “virtuous cycle”). See also Preston McAfee, Presentation, “Scale, Data, and Machine Learning: Solving the Search Problem” (2011), at 6 (“scale, liquidity, and access to data results in a virtuous cycle”); Microsoft EC Submission at 17 (“for smaller search engines, scale generates a ‘virtuous cycle’ that rapidly improves quality”).

⁷⁷ See Schmidt Tr. 178:17-179:5 (“ There’s some evidence . . . that we’re past the point where there’s any particular benefit of using the user . . . information to improve [search quality on tail queries]. In other words, we have enough users already that more users don’t make it much better.”); *id.* at 284:3-286:18 (same); Brin Tr. 145:7-153:6 (discussing scale curve and diminishing returns; testifying that, while data sources are “still valuable, but you know, . . . you’d have to like double or ten times them to get you know, materially better”; agreeing that Google’s search quality will not improve significantly based on additional queries today; and testifying that if Google had 10-20 percent fewer queries today, this would create a “pretty marginal difference” in search quality); Manber Tr. 150:14-23 (“Well, obviously, after a while, there’s a diminishing return for data.”). See also e.g., **CX-129 (GOOGMANB-000029871-75)** (2009), at 73 (Google chief economist Hal Varian argues that increases in data are subject to “diminishing returns”); Michael L. Katz et al., “An Economic Analysis of Microsoft’s Allegations that Google’s Conduct Harms Competition by Reducing Bing’s Scale” (May 14, 2012), at 46 (“Benefits of scale in search are subject to diminishing returns. Click-and-query data are an important input to Google’s search algorithms, but the value of incremental data in providing relevant search results decreases as the amount of data available to those algorithms increases”); *id.* at 104 (“the effect of incremental advertisers on search monetization are subject to diminishing returns”).

⁷⁸ Brin Tr. 154:5-14. Brin did not state this premise as a mathematical certainty, only as an illustration of the “diminishing returns” curve. Preston McAfee, Yahoo!’s former chief economist, suggested that “having 2-3 times as many user observations,” particularly for “tail” queries, would result in substantially more than a one percent increase in quality – indeed, doubling a search engine’s queries would be “an enormous advantage.” McAfee suggested that a 3-to-1 advantage in query volume could result in a 70 percent increase in “precision” for that search engine’s ability to answer unique queries. Preston McAfee, Yahoo!, Presentation, “Scale, Data, and Machine Learning: Solving the Search Problem” (2011), at 8.

⁷⁹ See Brin Tr. 154:15-158:18 (testifying that, based on publicly available information of Microsoft’s query volume, he doesn’t believe that additional query volume would significantly improve Microsoft’s search quality). See also Michael L. Katz et al., “An Economic Analysis of Microsoft’s Allegations that Google’s Conduct Harms Competition by Reducing Bing’s Scale” (May 14, 2012), at 47 (arguing that, “because of the diminishing value of additional click-and-query data and Bing’s substantial and growing query volume, it is unlikely that query data from Google’s exclusive syndication and distribution arrangements would provide any considerable value to Bing”); *id.* at 104-105 (Microsoft already has a significant number of advertisers; any increase in ads volume or clicks would result in insignificant additional yield).

⁸⁰ See Microsoft EC Submission, at 26 (“The marginal returns for additional scale decrease once a platform reaches a certain scale”) (Mar. 31, 2011); Susan Athey, “Scale in Online Search” (Mar. 10, 2012), at 9 (“as query volume grows, RPS grows quickly at first and then becomes flatter, as more and more of the most important advertisers have already been attracted to the platform”).

⁸¹ Microsoft estimates that, in 1997, the size of the world wide web was approximately 200 million web pages; by 2008, the figure was approximately 1 trillion web pages; and today, there are anywhere between 5 and 20 trillion web pages. Susan Athey, “Scale in Online Search” (Mar. 10, 2012), at 11. See also e.g., Schmidt Tr. 33:15-25 (“the rate of growth of the Internet appears to be accelerating, so it’s getting – it’s getting worse faster, if you will, primarily because of generation of . . . user content”).

⁸² Susan Athey, “Scale in Online Search” (Mar. 10, 2012), at 11.

⁸³ *Id.* To this end, Microsoft conducted an experiment in 2008 that tested the effect on user engagement of reversing algorithmic improvements. Microsoft found that, when it moved back to two-year-old algorithms (essentially eliminating two years’ worth of user data), the search engine “significantly reduced user engagement” with Microsoft’s search engine. *Id.* at 13. Google came to the same conclusion when it removed

user click data from Google's NavBoost algorithm, which had a "significant [negative] impact" on search quality. Manber Tr. 122:16-123:12.

⁸⁴ However, Preston McAfee, Yahoo!'s former chief economist, suggests that, "[o]f all search engines, only Google may be experiencing declining returns to scale." As described earlier, *supra* note 78, he also stated that "having 2-3 times as many user observations," particularly for "tail" queries, would be "an enormous advantage" to a search engine. McAfee suggested that a 3-to-1 advantage in query volume could result in a 70 percent increase in "precision" for that search engine's ability to answer unique queries. Preston McAfee, Yahoo!, Presentation, "Scale, Data, and Machine Learning: Solving the Search Problem" (2011), at 8.

⁸⁵ Microsoft IR (Jun. 11, 2012), at 8. Contrast this with Sergey Brin's testimony that Google's quality difference would be "pretty marginal" with 20 percent fewer queries today. Brin Tr. 153:1-6. *See also* Preston McAfee, Presentation, "Scale, Data, and Machine Learning: Solving the Search Problem" (2011), at 8 (theorizing that, "[o]f all search engines, only Google may be experiencing declining returns to scale").

⁸⁶ Microsoft IR (Jun. 11, 2012). In 2010, Yahoo! contributed some 92 billion queries to Microsoft through the partnership. *See* Microsoft Data Submission (Jan. 31, 2012).

⁸⁷ Susan Athey, Presentation, "The Role of Scale in Competing in Online Search" (Mar. 26, 2012), at 22.

⁸⁸ Microsoft IR (Jun. 11, 2012). However, the particularities of the Microsoft-Yahoo! agreement makes things slightly more complex than if Bing were to run experiments directly over its own user volume. *Id.*

⁸⁹ Microsoft IR (Jun. 11, 2012). *See also* Susan Athey and Glenn Ellison, "Share, Scale, and Platform Policy as Drivers of RPS: Together, Can Yahoo! and Microsoft Close the Gap?" (Apr. 3, 2008), at 5.

⁹⁰ Microsoft's modeling suggested an improvement of 20 percent; Microsoft has actually realized approximately 3 percent improvement. Microsoft cites a host of complexities surrounding the agreement (e.g., payments of large guarantees, non-discriminatory experiments) that have so far prevented Microsoft from taking full advantage of the additional volume. Microsoft believes that RPS will improve in line with its initial modeling as it works out some of these issues. Microsoft IR (Jun. 11, 2012).

⁹¹ As noted earlier, Google's mobile conduct will be described in a supplemental memorandum. In addition to the categories of conduct described herein, Staff initially investigated several other allegations, including: (i) that Google was unlawfully refusing to sell search advertising to certain competitors; (ii) that Google was unlawfully blocking competitors' access to YouTube video content; and (iii) that Google's exclusive agreements with desktop distribution partners (OEMs, browsers, and independent software vendors) were anticompetitive. Staff has not found sufficient evidence to support these allegations, and does not discuss them in detail here.

⁹² For example, Google removed search result pages from its index with no user testing, having determined that such pages constitute spam. Google also changed its algorithm without testing to stop taking into consideration the co-occurrence of product comparison sites. These changes, which may have significant effects on Google's SERP, are often implemented through a "Changelist process" with little documentation.

⁹³ The "sandbox" is a closed system of Google engineers where Google runs sample queries using the new algorithm and makes adjustments as needed. Google IR (May 23, 2011).

⁹⁴ *Id.* Generally, three to five raters compare the SERPs for a new algorithm against the old algorithm and score the new SERP as being more or less relevant than the old SERP. RBB Economics, *Google's Assessment of Changes to the Product Universal Results*, at 4-5, Google Submission (Sep. 6 2010) (White Paper).

⁹⁵ According to Google, it conducts live tests if the SxS results show that the new algorithm provides better results. Google IR (May 23, 2011). Live experiments may be conducted to assess the relative number of clicks and abandoned searches between the new and old algorithm. *Id.*

⁹⁶ Google IR (May 23, 2011).

⁹⁷ Google IR (May 23, 2011).

⁹⁸ *Id.*

⁹⁹ Google Submission, "Search Innovation: An Overview of Developments in the Delivery and Display of Thematic Search Results" (Dec. 21, 2011), at 59 ("Google Search Innovation White Paper"); **GOOGMAYE-000002939-40** (2003), at 39. Chris Sherman, *Online Shopping with Google's Froogle*, Search Engine Watch, Dec. 11, 2002, <http://searchenginewatch.com/article/2067723/Online-Shopping-with-Google-Froogle> (Google launched its product vertical, Froogle, on Dec. 11, 2002); Google Newsletter Archive, Google Introduces Image Search, <http://www.google.com/googlefriends/jul2001.html#image> (last visited Jul. 31, 2012) (Google Image Search launched on Jul. 28, 2001); Stefanie Olsen, *Google Search Gets Newsier*, CNET, Sep. 23, 2002, <http://news.cnet.com/2100-1023-958927.html> (Google launched Google News, on Sep. 23, 2002); Chris

Sherman, *Google Introduces Book Searches*, Search Engine Watch, Dec. 16, 2003, <http://searchenginewatch.com/article/2065619/Google-Introduces-Book-Searches> (Google launched Google Print on Dec. 16, 2003); The above citations are linked-to from, Google's Official Webpage, Our History In Depth, <http://www.google.com/about/company/history/#2012> (last visited Jul. 31, 2012).

¹⁰⁰ Mayer Tr. 67:3-18.

¹⁰¹ **GOOG-Texas-1325832-33** (2010), at 33.

¹⁰² **GOOG-Texas-1486915-70**, at 28-29. Numerous documents demonstrate Google's recognition of this vertical threat. See, e.g., **GOOG-ITA-05-0012603-16** (2009), at 4-5 ("Some vertical aggregators are building brands and garnering an increasing % of traffic directly (vs. through Google); . . . Strong content is improving aggregator organic rankings and generating higher quality scores, giving them more free and/or low-CPC traffic; . . . A growing % of finance/travel category queries are navigational vs. generic (e.g., southwest.com vs. cheap airfare). This demonstrates the power of these brands and risk to our monetizable traffic"); **GOOG-ITA-04-0004120-46** (undated, c. Feb. 2009), at 11 (presentation discussing the "vertical specialist challenge," and noting that the "potential threats to Google" included "*generic product searches* moving from Google . . . to Vertical aggregators," "Vertical Aggregators taking *higher share of 'last clicks'* before sale," and "merchants increasing % of spend on aggregators . . . vs. Google") (emphasis in original). **CX-158 (GOOG-ITA-06-0021809-13)** (2005), at 10 (email from Bill Brougher, a Google product manager, stating, "what is the real threat if we don't execute on verticals? (a) loss of traffic from google.com because folks search elsewhere for some queries; (b) related revenue loss for high spend verticals like travel; (c) missing opty if someone else creates the platform to build verticals; (d) if one of our big competitors builds a constellation of high quality verticals, we are hurt badly."); **GOOGWRIG-000069488-524** (2008), at 489 ("Google's core business is monetizing commercial queries. If users go to competitors such as Amazon to do product queries, long-term revenue will suffer."); **GOOG-Texas-0274944-47** (2009), at 44 (discussing creation of a slide for the Google Board of Directors about verticals from a search perspective, i.e., "users going to aggregators rather than [G]oogle for specific queries" and an ads perspective).

¹⁰³ See, e.g., **GOOG-ITA-04-0063246-55** (2009), at 47 (presentation laying out "four key vertical growth opportunities," including finance (EU), travel, local, and retail). Most recently, Google has introduced its own social product, Google Plus, which competes with Facebook, Twitter, and other social networking sites. See Twitter IR (Dec. 13, 2011); Facebook IR (Jan. 24, 2012).

¹⁰⁴ By March of 2004, Google had launched the Beta form of a local vertical property to handle local queries. Juab Carlos Perez, *Google Offers New Local Search Service*, InfoWorld, Mar. 17, 2004, <http://www.infoworld.com/t/applications/google-offers-new-local-search-service-561>.

¹⁰⁵ See, e.g., **GOOG-Texas-0197410-14** (2008), at 10 (preparing presentation for executives showing Amazon queries increasing and Google's flat or declining, as "a strategic justification for the Product Search Movement"); **GOOG-Texas-0971713-27** (2008), at 13 (presentation discussing investing in content acquisition to win maps/local). For example, in shopping, Google committed to massive investment, introduced a new version of its shopping vertical, and introduced new ways of displaying information from the vertical. In 2006, Google decided that its comparison shopping site, Froogle, had failed, and decided to stop working on or promoting Froogle, while it worked on its new shopping product, Google Product Search. **GOOGEC-0076341-42** (2006), at 41; **GOOG-Texas-0213227** (2006). Accordingly, the traffic to Froogle fell dramatically. Google launched Google Product Search to replace Froogle in Apr. 2007. Danny Sullivan, *Goodbye Froogle, Hello Google Product Search*, Search Engine Land Apr. 18, 2007, <http://searchengineland.com/goodbye-froogle-hello-google-product-search-11001>; **GOOG-Texas-0216363** (2007) (discussing launch of Google Product Search the following week). Shortly afterward, in May 2007, Google launched the product universal. See Press Release, Google Inc. Google Begins Move to Universal Search, Release (May 16, 2007), previously available at http://www.google.com/intl/en/press/pressrel/universalsearch_20070516 (accessed Feb. 1, 2012, since removed from this URL, copy saved by Staff); David Bailey, *An Insider's View of Google's Universal Search*, previously available at <http://searchengineland.com/an-insiders-view-of-google-universal-search> (accessed February 1, 2012, since removed from this URL, copy of article saved by Staff).

¹⁰⁶ See **CX-157 (GOOG-Texas-0213579-580)** (Oct. 5, 2009), at 580 (including slide for Google Board presentation, "Vertical Search: Making progress on multiple fronts," identifying Google verticals in images, books, products, news, travel, health, real estate, finance, and mortgages). Google launched Google Finance on Mar. 21, 2006. AC Narendran & Katie Jacobs Stanton, *Spring is the Season for Love (and Data)*, Google, Mar.

21, 2006, <http://googleblog.blogspot.com/2006/03/spring-is-season-for-love-and-data.html#!/2006/03/spring-is-season-for-love-and-data.html>. Google launched Google Health on May 19, 2008. Marissa Mayer, *A Peek into Our Search Factory*, Google Blogspot, May 19, 2008, <http://googleblog.blogspot.com/2008/05/peek-into-our-search-factory.html#!/2008/05/peek-into-our-search-factory.html>. Google launched a vertical that enabled users to compare mortgage options on Oct. 29, 2009. Dan Friedman, *Introducing Adwords Comparison Ads*, Google Adwords Blogspot, Oct. 29, 2009, <http://adwords.blogspot.com/2009/10/introducing-adwords-comparison-ads.html>. Google launched its flight search service on Sep. 13, 2011. Kourosh Gharachorloo, *An Early Look at Our Flight Search Feature*, Google Inside Search Blogspot, Sep. 13, 2011, <http://insidesearch.blogspot.com/2011/09/early-look-at-our-flight-search-feature.html>. Google is also experimenting with a hotel finder vertical. See www.google.com/hotelfinder/; Eric Swallow, *Google Launches Hotel Search Tool with Room Price Data*, Mashable, Jul. 28, 2011, <http://mashable.com/2011/07/28/google-hotel-finder/>.

¹⁰⁷ Marissa Mayer later served as vice-president of search products, with product management responsibility for all of Google's search products including web results, product search, local search, image search, etc., starting in Nov. 2005. Mayer Tr. 8:15-8:20. In Jul. 2012 Mayer left Google to join Yahoo! as its CEO. Alexei Oreskov, *Yahoo hires longtime Google exec Mayer as new CEO*, Reuters, Jul. 16, 2012, <http://marketday.msnbc.msn.com/news/2012/07/16/12773213-yahoo-hires-longtime-google-exec-mayer-as-new-ceo?lite>.

¹⁰⁸ See Mayer Tr. 91:13-92:6 ("Universal search was a term that I came up with. ... Eric asked what new types of things we could do in search, and I said, wouldn't it be great if people could just use our one search box and get all the different results in one place?").

¹⁰⁹ **GOOGMAYE-000002939-40** (2003), at 40.

¹¹⁰ See David Bailey, *An Insider's View of Google's Universal Search*, previously available at <http://searchengineland.com/an-insiders-view-of-google-universal-search> (accessed Feb. 1, 2012, since removed from this URL, copy of article saved by Staff) (David Bailey is the lead Engineer of Universal Search); Mayer Tr. 90:20-91:12 ("... one box was predictive ... we had one box technology which would predict whether or not one box results would be useful and would then go out to the index.").

¹¹¹ See David Bailey, *An Insider's View of Google's Universal Search*, previously available at <http://searchengineland.com/an-insiders-view-of-google-universal-search> (accessed Feb. 1, 2012, since removed from this URL, copy of article saved by Staff) (David Bailey is the lead Engineer of Universal Search).

¹¹² Mayer Tr. 90:2-91:12 ("With universal search we began searching everything with every query ...").

¹¹³ Google explains that with the introduction of Universal Search, it moved from featuring "10 blue links" (algorithmically calculated organic search results) on its search results page to incorporating "thematic" vertical content where Google deemed it to be relevant to users. See Google Submission to Federal Trade Commission, Dec. 21, 2011, Search Innovation: An Overview of Developments in the Delivery and Display of Thematic Search Results ("Google Search Innovation White Paper"), at 56; Google Narrative Interrogatory Response, (Oct. 14, 2011), at 23-35.

¹¹⁴ For example, news articles were ranked by Google News on a scale of 0-0.35; images were ranked by Google Images on a scale from 0-6; and websites in Google's web search index were ranked on a scale from 0-0.5. **GOOG-Texas-0178786-803** (Apr. 18, 2006), at 803. Google thus had no way of directly comparing the relevance rankings of items within these different corpora.

¹¹⁵ *Id.*

¹¹⁶ For example, Google compares the quality of the shopping results in its shopping vertical with other shopping sites to compare its shopping vertical to the results provided by competitors. *Id.*; **GOOGMAYE-000019280** (Mar. 5, 2003), at page 6 (comparing Froogle with competitors Yahoo, Amazon, eBay, BizRate, DealTime, and others using metrics "Top10 Precision" and "Avg. # Good Results"). See also **GOOG-WRIG-000069488-524** (2008), at 490 ("Key metrics - Better search quality than both Amazon and Nextag on all but their top queries ... Q4 goals - Rank #1 in search quality vs. all competitors, including Amazon and eBay"); **GOOGEC-0015567-76** (Feb. 26, 2007), at 74 (Bill Brougner explaining, "It's not really apples-to-apples to compare eBay or shopping.com to Google web; more consistent would be to compare to froogle since it is our shopping product.").

¹¹⁷ Google Search Innovation White Paper (2011), at 57-58.

¹¹⁸ *Id.* at 58.

¹¹⁹ For example, in 2008, Google had the goal to “[i]ncrease google.com product search inclusion to the level of google.com searches with ‘product intent’, while preserving clickthrough rate.” **GOOG-Texas-0227159-66** (2008), at 60 (“2008 goal” for “Google.com Integration”). Google had a goal for the first quarter of 2008 to increase the triggering of the Product Universal to 6% for English sites. **GOOG-Texas-0236963-65** (2008), at 63. In the second quarter of 2008, that goal changed to increasing top OneBox coverage by 50 percent and top CTR by 10 percent, and to “[i]ncrease coverage on head queries. For example, we should be triggering on at least 5 of the top 10 most popular queries on amazon.com at any given time, rather than only one.” **GOOG-Texas-0227159-66** (2008), at 60. To increase triggering on head queries, Google also implemented a change to trigger the Product Universal on google.com queries if they appeared often in the product vertical. “Using Exact Corpusboost to Trigger Product Onebox” compares queries on www.google.com with queries on Google Shopping, triggers the Product OneBox if the same query is often searched in Google Shopping, and automatically places the universal in position 4, regardless of the quality of the universal results or user “bias” for top placement of the box. **GOOGLR-00330279-80** (2008) (Launch Report for algorithm change).

¹²⁰ See, e.g., **GOOG-Texas-0233970** (2007) (mandate from executive meeting to increase appearance of Universal Search results for all product-related queries as quickly as possible); **GOOG-Texas-1004148-52** (2007), at 48 (“Larry thought product should get more exposure”); **GOOG-ITA-04-0004120-46** (2009), at 36 (presentation stating that Google could take a number of steps to be “#1” in verticals, including “[e]ither [getting] high traffic from google.com, or [developing] a separate strong brand,” and asking: “How do we link from Search to ensure strong traffic without harming user experience or AdWords proposition for advertisers?”); **GOOGFOX-000082469** (2009), at 4 (presentation notes that Mortgage OneBox on Google.com “drives traffic to consumer front end”). In order to speed up market share in shopping for Google, the shopping team wanted a “strategic direction to dial up google.com inclusion,” and had a list of session metrics showing Google at #8 behind eBay, Amazon, Shopping.com, Shopzilla, etc. **GOOG-Texas-0197424-29** (2008), at 24.

¹²¹ **GOOG-Texas-0191859-61** (2008), at 59 (reducing the frequency of the product universal would “ced[e] recent share gains to competitors”); **GOOG-Texas-0214339** (2008) (Jen Fitzpatrick noting, “Long term, the product search team feels strongly that PS-universal is critical to maintain and increase the share of product-related (and therefore highly commercial) queries that people do on Google.”); **GOOGEC-0069974** (2009) (email from John Hanke, head of Google Local, to Marissa Mayer, “long term, I think we need to commit to a more aggressive path w/ google where we can show non-webpage results on google outside of the universal ‘box’ ... most of us on geo think that we won’t win unless we can inject a lot more of local directly into google results.”); **GOOG-Texas-0199877-910** (2008), at 909 (“Google’s key strengths are: Google.com real estate for the ~70MM of product queries/day in US/UK/DE alone”); **GOOG-Texas-0909676-77** (2009), at 76 (John Hanke noting, “I think the mandate has to come down that we want to win [in local] and we are willing to take some hits [i.e., trigger incorrectly sometimes]. I think a philosophical decision needs to get made that results that are not web search results and that displace web pages are “OK” on google.com and nothing to be ashamed of. That would open the door to place page or local entities as ranked results outside of some ‘local universal’ container. Arguably for many queries _all_ of the top 10 results should be local entities from our index with refinement options. The currently mentality is that the google results page needs to be primarily about web pages, possibly with some other annotations if they are really, really good. That’s the big weakness that Bing is shooting at w/ the ‘decision engine’ pitch – not a sea of pointers to possible answers, but real answers right on the page. ...”).

¹²² In the spring of 2008, Google estimated that the top placement of the Product Universal would lead to an “annualized loss of \$154 million” on product queries. **GOOG-Texas-0178597-607** (2008), at 598 (“Product Search Universal Holdback Experiment”). The advertising team requested that the Product Universal trigger less frequently to reduce the loss of ads revenue. The Product Search team objected, presenting to executives that: Google must retain and grow product queries: “We face strong competition and must move quickly. Turning down onebox would hamper progress as follows – Ranking: Losing click data harms ranking; [t]riggering Losing CTR and google.com query distribution data triggering accuracy; [c]omprehensiveness: Losing traffic harms merchant growth and therefore comprehensiveness; [m]erchant cooperation: Losing traffic reduces effort merchants put into offer data, tax, & shipping; PR: Turning off onebox reduces Google’s credibility in commerce; [u]ser awareness: Losing shopping-related UI on google.com reduces awareness of Google’s shopping features.” **GOOG-Texas-0178597-607** (2008), at 607. Rather than reducing triggering of the Product Universal, Google moved it down from position 1 to position 4 on the page, which reduced some cannibalization from the ads. See *infra* note 138.

¹²³ See, e.g., **GOOGFOX-000015092** (2009), at 5 (presentation suggests that Google's unique user interface for its mortgage vertical ad leads to greater user interaction and higher click-through rates); **GOOG-Texas-0199877-910** (2008), at 881 ("Vision: Improving Google.com search and ads for product queries . . . Proposed improvements . . . PS blending: New UIs to show product results and lead to a deeper product experience").

¹²⁴ Many subtle changes to Google's interfaces affect clicks to those links. For example, a merchant star rating on an Amazon ad reflecting Amazon's high rating (regardless of whether Amazon or one of its merchants is selling the product) increases clicks on text ads by 40 percent, Amazon CID Response at 17. Google has decided, however, to treat eBay ads differently and will not display a star rating for eBay based on the quality of eBay as a merchant, but only the rating of the underlying merchant – eBay thus does not get that increase in clicks which Amazon has experienced. eBay CID Response at 4-5.

¹²⁵ See, e.g., Living Social IR (Apr. 26, 2012). At one time, Google did consider third-party OneBoxes, but never deployed them. Mayer Tr. 83:6-84:1 (recalling that Google experimented with third-party OneBoxes in 2005 and 2006, but abandoned the effort).

¹²⁶ Google has acknowledged that it slotted its Universal Search blends into fixed positions on its search results page irrespective of the so-called organic search results. Google Search Innovation White Paper, at 57-58 (2011). However, Google argues that it is necessary to use different signals in returning organic results, which are triggered by a simple relevancy calculation, and vertical content, which requires an evaluation not just of relevancy, but of quality and other factors not identifiable by Google's organic results algorithms. See Google Submission to the European Commission, "Comparing Apples with Oranges, How Google Ranks Universal Search Results from Specialized Content-Specific Search Algorithms Within Web Search," Sep. 7, 2010. Microsoft also uses separate algorithms for incorporating vertical content into its search results page because of the differences in relevancy signals for each type of results. See Microsoft IR (Oct. 12, 2011).

¹²⁷ Click-through data shows that ranking position for natural search matters a great deal: 95 percent of users first click on rankings one through five. eBay IR (Jul. 16, 2012). See also Amazon CID Response at 21 (citing study performed by Tevye Krynski & Aaron Beppu, "Positional Bias White Paper" (Jul. 22, 2009), to show that drop in clicks from position one to position two on the SERP attributable to the position is about 37 percent, from position two to position three is 24 percent, and from position three to position four is 17 percent).

¹²⁸ As described earlier Google claims that it is unable to compare the quality of its own vertical properties against competing vertical properties. To the extent that it is unable to directly evaluate the scores of Google's vertical content against competitors' vertical properties, see *supra* note 114, this is true. However, Google routinely compares the quality of its vertical properties against competitors' vertical properties in seeking to improve the content of its own vertical properties. See *supra* note 116. See also Amazon CID Response at 35-37 (providing metric directly comparing the quality of Amazon's product search with Google Product Search).

¹²⁹ See, e.g., Expedia CID Response at 14 (asserting that Google Local only provides listings and links to a few hotels, with content of questionable quality, which is inferior to Expedia and Hotels.com which provide many more options and quality control); Yelp CID Response at 26-27 (listing several Yelp quality advantages including more and higher quality content and better filtering of unreliable reviews); TripAdvisor CID Response at 28-29 (alleging that the superiority of TripAdvisor features includes amenity and attribute filtering of hotels, the largest corpus of user generated reviews in the travel space, personalization and friend reviews through connection to Facebook; sophisticated content integrity algorithms, and vacation rental property listings); Amazon CID Response at 35-37 (listing Amazon advantages including better access to real-time Amazon product availability, a catalog designed and structured for product search, and better data about customer behavior); Living Social CID Response at 14-16 (alleging Living Social provides a higher level of service to consumers and merchants than Google and at times has more daily deal offers).

¹³⁰ eBay IR (Jul. 16, 2012).

¹³¹ *Id.* This analysis does not account for the existence of navigational searches for eBay, for which users are likely to click on eBay in the search results. On navigational searches, however, Google does not typically return Google Product Search, so such results are unlikely to be included in the results here.

¹³² eBay IR (Jul. 16, 2012).

¹³³ BE disagrees with the mode of analysis employed by eBay, noting that eBay did not account for clicks on advertisements or navigational clicks, see *supra* note 131.

¹³⁴ If Google used click-through rates to determine the Universal Search positioning, Google would introduce its property in, say, position 5 or 10, and if users clicked on the Google property more often than the websites ranked above it, the property's rank would gradually increase. Or, if Google introduced the property in a higher

position, if users clicked on other lower-ranked properties, the property's rank would gradually decrease. Click-through rate is an important factor in determining the relevance of other websites. *See supra* p. 14.

¹³⁵ Mayer Tr. 275:10-276:11.

¹³⁶ Co-occurrence signals were used in many vertical areas. Regarding Google Product Search, *see, e.g.*, Mayer Tr. 272:7- 277:8 (explaining that Google used the occurrence of comparison shopping engines at positions 1-3 in the web ranking to boost Google's product universal to position one, because a CSE would appear if it has a highly relevant product to the query, and, thus, Google Product Search must also have a highly relevant product) (*citing* **GOOG-Texas-0214363** (2009)). *See also* **GOOGLR-00161978-80** (2009), at 78 (launch report entitled "Product universal top promotion based on shopping comparison [site] presence" that relies on a list of "blessed sites" to trigger top promotion of product universals); **GOOGLR-00162103** (2009) (listing sites). Regarding Google Local, a local sites trigger – using, for example, CitySearch and Yelp – appears to have been introduced in 2007, *see* **GOOGLR-00297666-69** (2007), at 66 ("added a 'cooccurring sites' signal to bias ourselves toward triggering when a local-oriented aggregator site (i.e. Citysearch) shows up in the web results"); **GOOG-Texas-1324737-39** (2009), at 38-39 ("final trigger ... includes web-based signals such as yelp et al"). Regarding Google Books, Google used Amazon as a trigger, *see* **GOOG-Texas-0196298** (2009) (For books, we use Amazon as co-occurring site"). Google appears to have considered a trigger for the finance "OneBox" based on the presence of finance sites in organic results, but it is not clear it was launched. **GOOGLR-00257663-75** (2008), at 68.

¹³⁷ *See* **GOOGEC-0066150** (2009); **GOOGLR-00162615-17** (2009), at 15. Google has provided some evidence that it has discontinued this practice with respect to Google Product Search in Dec. 2010.

¹³⁸ Google did, at times, lower the position of certain Universal Search results. For example, in 2008, Google's search quality team recognized that Google Product Search results were often of poor quality. *See* **CX-168** (**GOOG-Texas-0214363**) (2009); **GOOGWRIG-000041022-23** (2009), at 22; **GOOG-Texas-0197396** (2009); **GOOG-Texas-0180522** (2008), at 22 ("With regard to middle/top threshold, raters say it goes at the top but clicks metrics suggest middle"). Around the same time, the Google advertising team expressed concern that the photos, pricing information, and other rich data provided by the Google Product Search diverted users' attention from ads, resulting in fewer clicks on ads. In the spring of 2008, Google estimated that the top placement of Google Product Search would lead to an "annualized loss of \$154 million" on product queries. **GOOG-Texas-0178597-607** (2008), at 598 ("Product Search Universal Holdback Experiment"). In response to both concerns, Google launched a series of "aggressive demotions" to move most Google Product Search results down a few positions on the SERP. *See* **GOOG-Texas-0178597-607** (2008), at 598 ("Product Search Universal Holdback Experiment") ("We are executing an aggressive plan to further improve google.com user experience for products that we estimate will reduce annualized loss from ~\$130mm to ~\$45MM within 4 weeks"); **GOOG-Texas-0214409-11** (2008), at 9 (Nick Fox writes that "the product search team said they were going to do a bunch of things to dramatically reduce the negative [revenue] impact of the product"); **GOOG-Texas-0178597-607** (2008), at 605 (estimating that these changes would result in the percentages of Google Product Search in positions 1, 4, and 10 going from "85/0/15" to "40/35/25," and a corresponding reduction in loss of advertising revenue from \$154 million to \$70 million). Specifically, in Jul. 2008, Google made three algorithm changes to "aggressively demote" more top OneBoxes to middle OneBoxes. **GOOGMANB-000056049-54** (2008), at 50. These were: (1) "Product Search Universal Triggering 2.0 [which] mainly moves them to a lower position", *id.*, (2) "Using Exact Corpusboost to Trigger Product Onebox", which compares queries with queries on Google Shopping, triggers the Product OneBox if the same query is often searched in Google Shopping, and automatically places the universal in position 4, **GOOGLR-00330279-80** (2008), at 79 (Launch Report for algorithm change); and (3) "Aggressive Demotion to Middle for Product Universal," which demotes from position one to position four if the product OneBox does not meet a higher relevance threshold, the first web result is navigational with high probability, or two out of the top three results are for a manufacturer. This change demoted about 51 percent of top product OneBoxes to the middle). **GOOGMANB-000055473-76** (2008), at 73-74 (Launch Report for algorithm change). *See* **CX-168** (**GOOG-Texas-0214363**) (2009); **GOOG-Texas-0197396** (2009). The "aggressiveness" of the demotion effort is debatable, as Google continued to display Google Product Search results in the fourth position. And even these minor demotions were apparently quite controversial within Google. For example, Marissa Mayer "threatened to come to quality launch review to defend keeping product universal at [position] 1." **GOOGWRIG-000041022-23** (2009), at 22. In any event, these demotion efforts were short-lived, as Google quickly moved Google Product Search

back into the top position on the SERP for many shopping queries. *See* **GOOGEC-0066150** (2009); **GOOGLR-00162615-17** (2009), at 15.

¹³⁹ *See* Facebook Presentation (Mar. 7, 2012), at 6 (showing Google Plus content on the right hand side in response to a query for “Music”) and at 8 (showing Google Plus pages in an automatic suggestion). Google displays only Google Plus content, even if Google’s natural search results demonstrate that Facebook, Twitter, or other social media content is the most relevant to a particular query. *See* www.focusontheuser.org (Follow “Watch a Walkthrough” hyperlink) (The contained video demonstrates how Google would display social media results on the RHS if Google used the same algorithm for the RHS that it uses to return Organic Search links.); Facebook Presentation (March 7, 2012), at 9-12 (showing fair results per the Focus on the Media video).

¹⁴⁰ *See* **GOOGEUST-000018594-95** (2011).

¹⁴¹ Google initially displayed Google Plus links directly within the block of links, *i.e.*, indented under the link for Dell.com in the example. Facebook IR (Jan. 24, 2012); Facebook Presentation (Mar. 7, 2012), at 7. Some companies were quite unhappy about this development. Amazon, for example, was concerned that the inclusion of a link to the Google Plus page on a navigational search for Amazon would drive traffic to Google Plus rather than to Amazon. Because it is one of Google’s largest advertisers, Amazon requested immediate removal of the Google Plus link in the mega-site links, and Google complied. *See* Amazon CID Response at 5-7; Amazon IR (Feb. 1, 2012); **GOOGEUST-000019807-11** (2011), at 7. Google has continued to comply with Amazon’s request, and does not show the right hand column link to Amazon’s Google Plus page as it does for Dell in the screen shot above.

¹⁴² *See* Facebook Presentation (Mar. 7, 2012), at 11 (showing that, for the query “Macy’s”, Google’s own web search algorithm shows Facebook as the most relevant social media result, and thus should display a link to Facebook in the megasitelink).

¹⁴³ *See supra* note 106 for the launch dates of these vertical properties. *See also* Living Social Presentation (Apr. 26, 2012), at 22.

¹⁴⁴ **CX-157 (GOOG-Texas-0213579-80)** (2009), at 80 (“AdWords Comparison Ads to better monetize key verticals – Launched Mortgages – Credit cards, Education and Mobile/Telecom coming in Q4/Q1”).

¹⁴⁵ *See* Living Social Presentation (Apr. 26, 2012), at 22 (showing screen shot of Google Offers ads).

¹⁴⁶ *See* Amazon CID Response at 30 (showing screen shot of new Google paid shopping interface).

¹⁴⁷ *See* Expedia Presentation to the FTC (Feb. 13, 2012), at 18 (showing screen shot of Google Flight Search). Google Flight Search is now labeled as “Sponsored”.

¹⁴⁸ Google previously relied on search advertising – not direct merchant payments – to monetize Google Product Search.

¹⁴⁹ *See* Google Presentation to FTC on New Shopping Model (May 24, 2012); Danny Sullivan, *Google Product Search to Become Google Shopping, Use Pay-To-Play Model*, Search Engine Land, May 31, 2012, <http://searchengineland.com/google-product-search-to-become-google-shopping-use-pay-to-play-model-122959>. Google’s competitors in these areas also have paid listing models, generating revenue when a user clicks through to a merchant site or when a user purchases from the merchant (*e.g.*, LendingTree in mortgages; Groupon and Living Social in offers; Orbitz and Expedia in flight search; NexTag, Shopping.com, eBay Marketplace, and Amazon Marketplace in shopping).

¹⁵⁰ Amazon CID Response at 18 (click-through rate of 34 percent if ads are in the top-of-the-page position; only 0.08 percent click-through when not at the top of the page); *id.* 19-20 (the top positioning of Product Listing Ads push down text ads from others, leading to much lower clicks); *id.* at 21-22 (Figure 4.2 showing example of how receiving higher placement on Amazon pages can give an ads 3.2x the clicks); *id.* at 29-30 (explaining that the graphical Google Shopping paid ads will be placed at the top of the search results, “the most valuable placement on the page”).

¹⁵¹ *See* Expedia CID Response at 14 and 25. For example, Google does not provide flight options that contain segments with multiple carriers or the information required by the Department of Transportation of carriers and online travel agents (such as disclosure of operating carrier or baggage fees). Similarly, Google’s Hotel Finder lacks many features available from competing sites, including the ability to search by amenity, detailed cost information, and detailed descriptions. *Id.*

¹⁵² *See supra* note 123. *See also* Amazon CID Response at 23-24 (showing increased ad clicks from removing background shading and boxes around ads, and from increasing font size); *id.* at 25 (a small bullet next to a text ad increased clicks on Amazons pages by 14.6 percent); NexTag CID Response at 16-26 (explaining that

Google does not allow comparison shopping sites to advertise in ads with graphics such as Product Listing Ads and Product Extension Ads which have higher clicks and conversions than text ads).

¹⁵³ See Response to the Microsoft Economist Report on “Anticompetitive Organic Search Manipulation” (Jul. 7, 2011) (stating the Panda update “was designed to ensure a higher ranking for high-quality sites with original content and information and reduce the ranking of, inter alia, ‘content farms,’ i.e., low-quality ad-oriented websites, typically containing content copied from other websites.”); Economic Response to the Complaints by Foundem and Ejustice.fr - RBB Economics (May 12, 2010) (“... Google applies a set of rules designed to prevent sites that contain inappropriate content, malware or non-original content from showing up high in its search and ad results.”). See also Google’s Webmaster Guidelines, Little or No Original Content, <http://support.google.com/webmasters/bin/answer.py?hl=en&answer=66361> (last visited Jul. 2, 2012)

¹⁵⁴ Although Google originally sought to demote *all* comparison shopping websites, after Google raters provided negative feedback to such a widespread demotion, Google implemented the current iteration of its so-called “diversity” algorithm. See **GOOG-Texas-0179485-92** (2006), at 85 (identifying shopping comparison sites for demotion); **GOOGEC-0148152-56** (2007), at 53 (testing algorithm that would result in “SERP declines between 8 and 20 percent” for shopping comparison sites); **GOOGMANB-000007246-47** (2007), at 46 (launching the algorithm in Dec. 2007). Google claimed that the goal of this algorithm was to “increase the diversity of Google’s search results for product related queries.” See Response of Google to DG Comp (Nov. 22, 2010), at § 2.2, p.1.

Initially, Google compiled a list of target comparison shopping sites and demoted them from the top 10 web results, but users preferred comparison shopping sites to the merchant sites that were often boosted by the demotion. **GOOGSING-000014116-17** (2006), at 16-17 (“We had moderate losses when we promoted an etailer page which listed a single product because the raters thought this was worse than a bizrate or nextag page which listed several similar products. Etailer pages which listed multiple products fared better but were still not considered better than the meta-shopping pages like bizrate or nextag...”). Google then tried an algorithm that would demote the CSEs, but not below sites of a certain relevance. **GOOGEC-0168032-33** (2006), at 32. Again, the experiment failed, because users liked the quality of the CSE sites. **GOOGSING-000014375-76** (2006), at 75 (“The bizrate/nextag/epinions pages are decently good results. They are usually well-forma[t]ed, rarely broken, load quickly and usually on-topic. Raters tend to like them. I make this point because the replacement pages that we promote are occasionally off-topic or dead links. Another positive aspect of the meta-shopping pages is that they usually give a variety of choices. ... The single etailer pages tend to be single product pages. For a more general query, raters like the variety of choices the meta-shopping site seems to give.”) Google tried another experiment which kept a CSE within the top 5 results if it was already there, but demoted others “aggressively.” *Id.* at 76. This too resulted in slightly negative results. *Id.*

Unable to get positive reviews from raters when Google demoted comparison shopping sites, Google changed the raters’ criteria to try to get positive results. Previously, raters judged new algorithms by looking at search results before and after the change “side-by-side” (SxS), and rated which search result was more relevant in each position. **GOOGEC-0168014-27** (2007), at 25. After the first set of results, Google asked the users to instead focus on the diversity and utility of the whole set of results, rather than result by result, telling users explicitly that “if two results on the same side have very similar content then having those two results may not be more valuable than just having one.” *Id.* at 23. When Google tried the new rating criteria with an algorithm which demoted CSEs such that sometimes no CSEs remained in the top 10, the test again came back “solidly negative.” *Id.* at 19. Google again changed its algorithm to demote CSEs only if more than two appeared in the top 10 results, and then, only demoting those beyond the top two. With this change, Google finally got a slightly positive rating in its “diversity test” from its raters. *Id.* at 16; **GOOGEC-0148152-56** (2007), at 52 (“Launch Report: Shopping Comparison Demotion”). Google finally launched this algorithm change in Jul. 2007. **GOOGEC-0014649** (2007) (launching at one Google data center); **GOOGMANB-000007246-47** (2007), at 46 (launching to all remaining Google data centers).

¹⁵⁵ Brent Rangen, *Google Goes Boom on Low Quality Sites ... So They Say*, Search Engine Watch, Feb. 25, 2011, <http://searchenginewatch.com/article/2049961/Google-Goes-Boom-on-Low-Quality-Sites...So-They-Say>; Amit Singhal & Matt Cutts, *Finding More High Quality Sites in Search*, Google Blogspot, Feb. 24, 2011, <http://googleblog.blogspot.com/2011/02/finding-more-high-quality-sites-in.html>.

¹⁵⁶ Google determined which websites would be demoted in two ways. First, Google had a group of “spam raters” manually rate whether certain websites would be labeled as “content farms,” and thus, subject to demotion. **GOOGHUFF-000089790-93** (2011), at 91. Google provided specific instructions for its spam

raters to aid them in recognizing content farms. **GOOGLR-00111384-88** (2011), at 84 (in explaining URL rating results for expanding the Panda algorithm to all English sites, “we did ‘low quality article recognition’ training for all raters at the end of January (as well as special testing and feedback for US raters only. Because of this, raters have been more sensitive to the quality of results when rating since that date. Unfortunately, many URL ratings were completed before then”). Google then used the raters’ list of “content farms” to lower the ranking (IR Score) given by raters to those websites. Those rankings were then used to determine the severity of a website’s demotion. “The effect [was] pretty dramatic ...” *Id.*; **GOOGSING-000091277-88** (2011), at 77 (stating that the Panda algorithm’s “IR Score demotions” lead to “demoting low quality hosts severely”). *Second*, because the Panda algorithm affected such a broad swath of websites, Google manually “whitelisted” websites it did not deem worthy of demotion. *See, e.g.*, **GOOGSING-000091277-88** (2011), at 86 (approving demotion of TheFind); **GOOGSING-000091277-88** (2011), at 83 (attempting to prevent demotion of motortrend.com, trailspace.com, federalregister.gov, cases.findlaw.com, ambersmith.ning.com, and biggestloser.com); **GOOGSING-000092530-42** (2011), at 31 (the “hot_domains” list protects news sites and forums from demotion by the Panda algorithm).

¹⁵⁷ Sergey Brin, among other Google executives, testified that Google’s vertical websites appear similar to the websites of Google’s competitors. Brin Tr. 78:21-83:17.

¹⁵⁸ *See, e.g.*, **GOOG-Texas-0199877-910** (2008), at 877, 882 (“Product Search Strategy” to “Aggregate product info from the web”); **GOOG-Texas-1249384-86** (2006), at 84 (email from Google Local manager that “the info on the page is located elsewhere on the web, we’re just aggregating and displaying it in different ways.”); **GOOG-Texas-0241578-615** (2007), at 588 (Google’s Product Universal will “aggregate data about products from the web and other Google resources” and “aggregate data about merchants”).

¹⁵⁹ Brin Tr. 82:22-83:17; Hanke Tr. 251:18-254:20

¹⁶⁰ **GOOG-Texas-0001809-13** (2007), at 9-11. *See also* Brin Tr. 116:19-118:4.

¹⁶¹ **CX-174 (GOOG-Texas-0285382-87)** (2006), at 83-85 (noting that Froogle will not rank in Google’s own search results without “special treatment” and suggesting that the solution is to integrate Froogle results into a Google OneBox); **GOOG-Texas-0214361-62** (2009), at 61 (“From a principal perspective it would be good if we could actually just crawl our product pages and then have the[m] rank organically. Problem is that today if we crawl it will never rank”); **GOOG-Texas-1249384-86** (2006), at 84 (email from Bill Brougher, product manager for web search, refusing to index and display business pages from Google’s Local vertical in the organic results, “Generally we like to have the destination pages in the index, not the aggregated pages. So if our local pages are lists of links to other pages, it’s more important that we have the other pages in the index.”).

¹⁶² **GOOG-Texas-1249384-86** (2006), at 84.

¹⁶³ *See, e.g.*, Matt Cutts, *Algorithm Change Launched*, Matt Cutts: Gadgets, Google, and SEO, Jan. 28, 2011, <http://www.mattcutts.com/blog/algorithm-change-launched> (Matt Cutts blog announcing launch of algorithms to boost “sites that wrote the original content rather than a site that scraped or copied the original site’s content.”); **GOOGMANB-000037864-75** (2011), at 65 (Launch Report for Scrape Demotion international – “This project demotes hosts that have authored less than 15% of their content ...”); **GOOGHUFF-000039491-99** (2008), at 92 (Launch Report for Multi-Scraper – “This project applies a demotion to results that scrape a large percentage of their content from other sites.”); **GOOGMANB-000090848-53** (2011), at 50 (Launch Report for Author Swap – “This project aims at swapping the more original search result to a higher position if it ranks below the scrapers.”).

¹⁶⁴ Goodrow Tr. 267:12-268:8.

¹⁶⁵ Vertical websites provided data on traffic sources pursuant to CIDs issued to them. Staff culled the following data by examining traffic flow for a random week, the first week of Feb. 2012: **FTC-YELP-00000001** (2012) (92 percent of visits to Yelp come from Google sources); **FTC-EBAY-00000003** (67 percent of visits to eBay come from Google); **FTC-EXPE-00000001** (2012) (78 percent of non-navigational search visits to Expedia come from Google); **FTC-TRIPA-00000001** (2012) (73 percent of organic search visits to Trip Advisor come from Google); **FTC-THEFIND-00000002** (2012) (73 percent of organic search visits to TheFind come from Google); **FTC-NEXT-00000006** (2012) (35 percent of visits to NexTag come from Google); **FTC-LIVSOC-00000003** (2012) (14 percent of all visits to Living Social come from Google).

¹⁶⁶ **CX-152 (GOOGROSE-000012756-65)** (2004), at 59.

¹⁶⁷ For example, when Google implemented its Panda algorithm in Feb. and Apr. 2011, TheFind, Shopping.com, and DealTime experienced significant drops in traffic from Google. *See* TheFind CID Response (2012), at 3 (“With each of the first two Panda updates (1.0 and 2.0), Google organic traffic to TheFind dropped

off by 31% and 25% respectively”); Shopping.com Data Submission (2012) (showing drop in visits from 1.62 million to 1.17 million for the weeks before and after the second Panda algorithm launched in the first week of Apr. 2011); Dealttime Data Submission (2012) (showing drop in visits from 1.38 million to 0.508 million in the weeks before and after Panda initially launched in Feb. 2011). The drop in traffic to those websites also affects merchants, who prefer getting traffic from multiple sources. The monthly traffic from Pricegrabber and Shopping.com to Amazon dropped from the end of Feb. 2011 through the end of Oct. by, respectively, 35 percent and 30 percent. Amazon CID Response at 13. In addition, while traffic from Feb 2010 to 2011 increased 99 percent, traffic from May 2010 to 2011 decreased by 12 percent. *Id.* at 14. Staff has collected evidence of several declines in traffic to other competing verticals due to changes to Google’s SERP. *See, e.g., FTC-NEXT-00000005* (2012), at 70 (2007 search result page removal resulted in drop from about 900,000 to about 500,000 visits).

¹⁶⁸ *See, e.g., GOOGEC-1068069-72* (2009), at 70 (Comparison Shopping Demotion – “This project is likely to affect traffic flow to comparison shopping sites. The document located at [cited document] gives a detailed account of how this affects the number of impressions of various sites. The sites that lose the most impressions are, as expected, comparison shopping sites. The sites gaining impressions are retailers and even some government and edu sites.”); *GOOGEC-0148152-56* (2007), at 53 (Comparison Shopping Demotion – “The large comparison shopping sites see SERP declines between 8 and 20%”); *GOOGEC-0015560-66* (2007), at 60 (With respect to removing search result pages from the index, “In the end here the various Google impressions the stores will be losing (not necessarily traffic to the stores, but correlated): ebay – 3.6M impressions, amazon – 2.3M, dealtime – 150K, epinions – 200K, kelkoo – 620K, overstock – 50K, pricegrabber – 70K, shopping.com – 500K”).

¹⁶⁹ *See, e.g., GOOG-Texas-1265906* (2010) (email noting that Google’s local property now “dwarfs all other local sites in the world”); *GOOGFOX-000029790* (2011) (discussing traffic increase since launch of Google Advisor vertical).

¹⁷⁰ *GOOG-Texas-0199877-910* (2008), at 906. In its new iteration, Google Product Search took traffic from competing comparison shopping sites, despite some “pretty terribly embarrassing failures” with regard to returning relevant product results. *See GOOGWRIG-000041022-23* (2009), at 22. *See also GOOG-Texas-0192014-18* (2010), at 16 (email noting that Google’s product universal has increased shopping queries on Google) and, related, *GOOG-Texas-0004101-04* (2010) (“Product OneBox Traffic Impact Analysis”).

¹⁷¹ *GOOG-Texas-0199877-910* (2008), at 907.

¹⁷² *GOOG-Texas-0265014-16* (2010), at 14.

¹⁷³ NexTag CID Response at 13.

¹⁷⁴ *Id.* at 12.

¹⁷⁵ Websites engaged in “scraping,” according to Google’s launch report for “scraper demotion” are sites “that have authored less than 15% of their content” *GOOGMANB-000037864-75* (2011), at 65.

¹⁷⁶ *See, e.g., GOOG-Texas-1380771-73* (Jun. 2009), at 72 (email exchange discussing “scraping” review content from Yelp in lieu of reaching distribution agreement with Yelp); *see also* Yelp IR (Jul. 22, 2011); TripAdvisor IR (Jul. 6, 2011); Amazon IR (Nov. 18, 2011).

¹⁷⁷ *See, e.g., GOOG-Texas-1380771-73* (2009), at 71-72 (discussing importance of Google Places carrying better review content from Yelp). Google has since ceased scraping content (as of Jul. 2011), in a “voluntary” move allegedly designed to transition its own local vertical property into focusing on “original content.” *See* Google IR (Jul. 20, 2011).

¹⁷⁸ *See, e.g., FTC-YELPTX-00000163 and FTC-YELPTX-00000164* (2010) (email from Google to Yelp attaching standard Google license agreement).

¹⁷⁹ *See, e.g., Shopzilla IR* (Feb. 1, 2012) (stating that Shopzilla does not have the leverage to negotiate the terms of the feed license; it is a take-it-or-leave-it agreement).

¹⁸⁰ *GOOG-Texas-0240698* (2009).

¹⁸¹ *GOOG-Texas-0182336-38* (2009), at 36-37 (discussing Google’s use of “scraping” Amazon’s website to obtain Amazon Sales Rank of products, not available via Amazon’s feed).

¹⁸² *See supra* note 165; *see also e.g., TripAdvisor IR* (Mar 12, 2012) (web publishers “depend on search engines to gain visibility. Otherwise they just remain as tiny blips of information. Without the card catalogue, nothing is going to get found in the library. Because Google is dominant in organic search, the ecosystem depends on its services”). Websites believe that they need to make all of their content available for Google to crawl because this will improve their traffic from Google. First, websites believe that the more original content they

have on their pages (and allow Google to see), the more highly those pages will be ranked. Google encourages this belief, repeatedly telling webmasters that they should focus on having “information rich” web sites to get higher Google rankings. See Google Webmaster Guidelines, Best Practices to Help Google Find, Crawl, and Index Your Site, <http://support.google.com/webmasters/bin/answer.py?hl=en&answer=35769> (last visited Jul. 25, 2012). Sites thus allow Google to crawl all of their content to show the Google algorithm the quantity of high quality content they host on their sites. Second, websites want to ensure that keywords that may show up in a query will be crawled and indexed by Google. For example, a search for “Venice Italy vegan restaurants” on Google returns a web search link to a Chowhound page called, “Looking for great vegetarian food in Venice.” The only reference to the word “vegan” in the article is in one of the responses to the initial question, in which the respondent discusses vegan options. If a website does not permit Google to crawl the entire page, including all reviews, the site may not appear at all in the web search results in response to specific queries, or the website may not rank as highly.

¹⁸³ See eBay IR (Jul. 12, 2012) (having no problem with Google’s use of crawled reviews from Epinions.com because Google provides attribution to Epinions and displays links driving some traffic to Epinions); Shopzilla IR (Feb. 1, 2012) (explaining that Shopzilla provides feeds of Bizrate merchant reviews and ratings to Google partly to give merchants a reason to list their products on Shopzilla and partly as a source of traffic from Google); **GOOG-Texas-0244787-810** (2010), at 795 (discussing Wal-Mart’s willingness to provide ranking information regarding the popularity of products that reflect sales popularity such that Google’s results better reflect actual sales); *id.* at 787-793 (discussing how to use the 70,000 rankings provided by Wal-Mart).

¹⁸⁴ See, e.g., Amazon IR (Nov. 18, 2011). See also Amazon CID Response at 28 (“... Google insisted that it be able to use Amazon’s content data in connection with any Google product or service.”); Amazon IR (Feb. 16, 2012) (Amazon believes Google uses a detailed crawl of Amazon’s site to populate Google product search and create a digital catalog, but does not know for sure how Google uses its crawled data); Yelp CID Response at 21 (describing attempts by Yelp in Nov. 2010 to modify Google’s license agreement to prohibit Google from publishing Yelp content on Google Places pages or mobile applications, from using Yelp content to determine Google’s own ranking of business listings, from aggregating Yelp ratings with Google ratings).

¹⁸⁵ Yelp had a license with Google, **FTC-YELPTX-00000002**, which it discontinued in Jun. 2007. **FTC-YELPTX-00000023** (2007).

¹⁸⁶ See, e.g., **GOOGLEWE-000003926-28** (2006), at 26 (John Hanke, head of Google Maps, on why controlling the content is necessary: “I don’t think the traffic volume at an authoring site like [Yelp] will be that huge. It’s the content that’s valuable. When you own it, people knock on your door, want to deal with you, want to syndicate your service, etc. you can promote it to consumers as something they can’t get elsewhere. ... the alternative I see (if we don’t buy them) is to launch and promote our own local reviews community. I think that’s a crap shoot w/ a less 50/50 odds of working. Yahoo, which most observers would say ‘gets’ community much better than we do, isn’t doing that well in this area. ...”).

¹⁸⁷ **Goog-Texas-0975467** (2007) at 9 (PowerPoint presentation on key content acquisition and partnership initiatives). See also **GOOG-Texas-0879701-08** (2007), at 3 (agreeing to give Yelp advance notice of changes to Google Maps that affect Yelp because Google “should put them in a special category since we rely heavily on their content ...”).

¹⁸⁸ **Goog-Texas-0975467-97** (2007), at 75 (explaining the current situation as having “concern that [Yelp] (and similar) could become competing local search platforms”).

¹⁸⁹ See, e.g., **GOOG-Texas-0909614** (2009) (John Hanke explaining that he made two attempts to convince Larry Page and Sergey Brin to purchase Yelp [in 2006 and 2007] but was rejected both times).

¹⁹⁰ **GOOG-Texas-0859416-62** (2006), at 31 (Google had a strategy to win with Google Local through a “virtuous cycle”: first, “bootstrap” its local information with content it received from other web sites; second, “increase visibility” of Google Local with “Tight integration via Universal Search”; third, when users click on Google Local, they would be provided with an “entry point for user content”; fourth, Google would nurture and build that community; fifth, “gain market share – drive more usage”; and finally, Google would become “users first choice for all local content”).

¹⁹¹ **GOOG-Texas-0859416-62** (2006), at 31.

¹⁹² **GOOG-Texas-1261847-49** (2007), at 47 (“Downside of launching reviews now [1] we will lose review partners, which will negatively impact our local search user experience [2] it will take a long time to build up enough reviews to make up for lost reviews [3] we will alienate partners and make it hard to renegotiate contracts [4] we get a bad rep for being evil (using partners’ content to build up our traffic then dumping them

after we replicate their features”); Hanke Tr. 107:6-109:7 (citing **CX-0055** and discussing risk that if Google launched its own site, partners pulled their review content, and users didn’t contribute reviews, then Google would risk having no review solution).

¹⁹³ **GOOG-Texas-0996561-62** (2007), at 61; *see also* **GOOG-Texas-1074268-69** (2007), at 69 (email from Yelp CEO Stoppelman to Google’s John Hanke upon learning about “the Google review feature in Maps”, “In the interest of giving us enough time to negotiate in good faith, I’d like to request that you remove our review and photo content from Google Maps before launching your feature next week. We’re very uncomfortable with Google launching a directly competitive feature and we’d like to opt out while discussing what might be done to alleviate our concerns.”).

¹⁹⁴ **GOOGROSE-000082811-48** (2009), at 41 (“We have partially ended up where we feared we would in 2007 ... 3rd party content providers abandon Google ... Limited success with our Reviews ... Users begin to start at review sites for key categories/regions ...”).

¹⁹⁵ *See* Yelp IR (Mar. 5, 2012).

¹⁹⁶ **GOOG-Texas-0863053** (2009) (Eric Schmidt noting, when Yelp turned down Google’s offers, “as you can see the deal is apparently off ... [instead we need to] continue to build a great reviews product here at Google.” To this John Hanke responded “we’ll come to the oc in jan w/ a plan. my sense is that we should be prepared to invest some real money (\$100M?) building this up. It will require us spending on things (community managers as well as technologists, city-by-city community building, city-by-city marketing) that have been hard for us to wrap our arms around and commit to in the past. ...” Eric Schmidt responded, “Thanks. I completely agree with your approach here and will definitely fund it !! thanks”).

¹⁹⁷ John Hanke, *Introducing Google Places*, Google Blogspot, Apr. 20, 2010, <http://googleblog.blogspot.com/2010/04/introducing-google-places.html#/2010/04/introducing-google-places.html>.

¹⁹⁸ *See* John Hanke, *Introducing Google Places*, Google Blogspot, Apr. 20, 2010, <http://googleblog.blogspot.com/2010/04/introducing-google-places.html#/2010/04/introducing-google-places.html>.

¹⁹⁹ **GOOG-Texas-1363574** (Jul. 26, 2010) (“... I noticed you’re still using excerpts of our review content in local without license and counting them as Google ‘reviews’, yet you’ve demoted Yelp to the bottom regardless of freshness (happy to discuss, but we’re not ok with this use of our content)”).

²⁰⁰ TripAdvisor IR (Mar. 12, 2012).

²⁰¹ *Id.* (explaining that although TripAdvisor received some traffic from Google’s Places property, once Google became competitive with TripAdvisor, TripAdvisor had a reason to terminate the license, and the loss of traffic was very small).

²⁰² *Id.*

²⁰³ *See* **CX-67** (Google Blog, “Place Search: a faster, easier way to find local information”) (2010) (“Today we’re introducing Place Search, a new kind of local search result that organizes the world’s information around places.”); **GOOG-Texas-1012889-92** (2010), at 89 (“[Marissa Mayer’s] current proposal distinguishes between Search and ‘Content’ [Non-Search] pages, and accurately deems our ‘current’ Place and Product Pages to be ‘Content’ [Non-Search] pages, and concludes: partners should be allowed to choose whether they want to be included in such pages. I believe we all agree with Marissa on these (and all other) ideas ...”). Websites permit or block web crawlers from crawling their sites by including a robots.txt file on their web site *See, e.g.,* www.yelp.com/robots.txt; www.amazon.com/robots.txt; www.google.com/robots.txt. These files provide very crude capabilities, telling crawlers whether they can crawl data or not, not how the sites may use that crawled data. Websites that are not crawled are not included in Google web index and do not show up in organic search results. Google’s Webmaster Tools, Block or Remove Pages Using a Robots.txt File, <http://support.google.com/webmasters/bin/answer.py?hl=en&answer=156449&topic=1724262&ctx=topic> (last visited Jul. 2, 2012).

²⁰⁴ **GOOG-Texas-1041511-12** (2010), at 12 (“remove blacklist of yelp [reviews] from Web-extracted Reviews once provider based UI live”); **GOOG-Texas-1417391-403** (2010), at 394 (“stating that Google should wait to publish a blog post on the new UI until the change to “unblacklist Yelp” is “live”).

²⁰⁵ **GOOG-Texas-0222679** (2010) (“The competition in this space comes from two weaknesses: 1. We do not have much user-user or user-business communication on the Google platform. This is both a cultural and technological issue. 2. We do not have a complete solution wrt local businesses. We run the risk that competitors like facebook, twitter and yelp become the site where local businesses are discovered and interacted

with. We have the hotspot product coming out in this area and we hope that it will be a game changer for Google.”); TripAdvisor IR (Mar. 12, 2012) (explaining that Hotpot claimed to have thousands of reviews, but these reviews were from TripAdvisor, Yelp, and others, and used with no attribution – “Google stole from us to gain a critical mass of reviews”).

²⁰⁶ See, e.g., **TA_00001** (2010), at 2-3 (email from TripAdvisor CEO to Google, stating, “our content should be used as a snippet in onebox/place-page promo in the main google search results, and the number of our reviews shouldn’t be counted in any review totals that google is proclaiming in the main search result page, or elsewhere. It doesn’t seem fair that google is claiming to have 1,234 reviews of a hotel, when you have 4 reviews of your own, and links to 10 providers that have the remaining 1,230 reviews. In the cases where google shows a list of ‘places’ in the main search results (with the list of 4 review providers), I’m fine if you include tripadvisor in that list with our review count”).

²⁰⁷ **GOOG-Texas-1382163-65** (2010), at 63 (email from Yelp to Google identifying Google’s unauthorized use of Yelp’s reviews in aggregations in the Places Pages, Local Merge, mobile phone app, and Google Boost ads and stating, “We’ve got to find a solution here – either by taking Yelp out of those aggregate ratings, removing the aggregate ratings entirely or by discussing some other way in which google would compensate Yelp for its role in driving Google revenue.”); **GOOG-Texas-1130815-16** (2010), at 15 (email from Yelp’s CEO Stoppelman to Google’s Mayer, “As you may recall, we began talking about these issues in early Nov, so sadly, it’s been over a month and a half with little change. ... we are still waiting to be removed from Places (while remaining in organic and local merge results), which you initially agreed to (but have more recently pull away from)”); **CX-162 (GOOG-Texas-1130925-26)** (2011), at 25 (email from Stoppelman to Mayer stating that, if Google intended to only point to Yelp reviews and not include Yelp in its numbers of reviews, then Yelp would remain in reviews; otherwise, Yelp would “drop from Places/Local Merge and go it alone in organic”); Hanke Tr. 190:15-24 (CitySearch); **TA_00056** (2010) (email from CEO of TripAdvisor to Yelp CEO stating that TripAdvisor had asked Google to remove quotes to TripAdvisor reviews from Google Places); **TA_00054** (2010) (email from Yelp CEO to TripAdvisor CEO that Yelp had asked Google to remove Yelp completely from Google Places but leave Yelp in organic results and the “local merge” results in the SERP).

²⁰⁸ See, e.g., TripAdvisor IR (Mar. 12, 2012) (Google made it clear that the only way TripAdvisor could remove its content from Google Places was if TripAdvisor indicated in robots.txt that Google should not crawl TripAdvisor’s sites, thus also removing the sites from organic search results); Yelp IR (Mar. 5, 2012) (Google told Yelp the only way Yelp would not appear in Places or Maps pages was if Yelp delisted from organic search); **TA_00051-52** (2010), at 51 (Yelp CEO to TripAdvisor CEO Kaufner, “In our last discussion, Marissa [Mayer] started backing away from her agreement to remove us from place page (but leave in local merge and organic); *But see*, e.g., TripAdvisor IR (Mar. 12, 2012) (Google could easily modify the format of robots.txt so that web sites could specify which Google properties could display their content).

²⁰⁹ This is demonstrated by Google’s later adherence to precisely this type of limited “opt-out.” See, e.g., TripAdvisor IR (Mar. 12, 2012) (explaining why Google’s technological claim was “ludicrous” as to why Google could not remove TripAdvisor content from Places but leave it in the main web search results).

²¹⁰ See *supra* note 165.

²¹¹ Yelp IR (Mar. 5, 2012); TripAdvisor IR (Mar. 12, 2012).

²¹² **CX-170 (FTC-YELPTX-00000135-42)** (2011), at 36 (email from Yelp CEO Jeremy Stoppelman to Marissa Mayer including letter, stating “We look forward to your response and confirmation that you will cease using content from Yelp’s websites in connection with Google Local Products, while continuing to index Yelp’s websites for the purposes of Google’s Web Search product”). Google’s Marissa Mayer testified that she did not think that Yelp wanted its content removed, and was “surprised” to receive the Cease and Desist letter, despite Yelp’s numerous previous requests to be removed. Mayer Tr. 155:19-156:21.

²¹³ **CX-170 (FTC-YELPTX-00000135-42)** (2011), at 41 (indicating that Yelp expected its reviews to be removed from the Place Page listing, but not from the “local merge” on the main SERP).

²¹⁴ **GOOGMAYE-000062536-537** (2011), at 36.

²¹⁵ Google removed Yelp’s content from Google Local on Jul. 21, 2010, just seven days after receiving the Cease and Desist letter, showing Google was able to quickly remove the content. Google claims it had great difficulty removing the content. After claiming it was “very difficult” and took “six weeks” to remove the content, Marissa Mayer admitted that it actually took less than two weeks to do so. Mayer Tr. 136:8-18; *id.* at 159:6-160:16.

²¹⁶ **GOOGMAYE-000062536-537** (2011), at 36 (Marissa Mayer wrote to Jeremy Stoppelman, “we do not have the ability to immediately customize which search features a website is included in.”).

²¹⁷ See, e.g., Hanke Tr. 143:20-144:8 (citing **CX-61, GOOG-Texas-0864517-518** (2009), on providing per-domain blacklisting for Google local); Goodrow Tr. 116:12-119:11 (discussing a few methods of preventing product content from appearing in Google Product Search). Moreover, Google has also proposed to adhere to commit to precisely such an “opt-out” feature in its proposal to the EC. See Google-EC Settlement Proposal at 15-16.

²¹⁸ Mayer Tr. 223:11-224:7.

²¹⁹ Avni Shah, *The Ongoing Evolution of Place Pages*, Google Lat-Long Blogspot, Jul, 21, 2011, <http://google-latlong.blogspot.com/2011/07/ongoing-evolution-of-place-pages.html>. (“Based on careful thought about the future direction of Places pages, and feedback we’ve heard over the past few months, review snippets from other web sources have now been removed from Place pages. Rating and review counts reflect only those that’ve been written by fellow Google users, and as a part of our continued commitment to helping you find what you want on the web, we’re continuing to provide links to other review sites so you can get a comprehensive view of locations across the globe.”)

²²⁰ See, e.g., Goodrow Tr. 35:18-22; 80:11-22; 81:11-23; 109:18-110:7.

²²¹ See, e.g., Goodrow Tr. 77:2-16; 114:2-12; 164:18-165:9; 185:14-186:11.

²²² Amazon CID Response at 28.

²²³ *Id.*

²²⁴ **GOOGBRAD-000049034-35** (2010) (including email from Amazon executive Steven Shure regarding “Google’s use of Amazon’s customer product reviews and ratings”).

²²⁵ **GOOG-Texas-1039100-101** (2010), at 100 (“As I said on our call, we would like Google to no longer display or incorporate the Amazon product reviews information, including text and stars/ratings, which it ingests [through] its natural search crawl, within Google Product Search. ... We ask that you remove the review excerpts from the display and the star ratings from your overall product rating calculation. Their current use is without Amazon’s permission. ... We would like you to get back to us in a week, by September 3rd, with a date by which Google will be able to remove Amazon review information from product search. ... on the surface it would seem that we are simply asking you to make a change which directly parallels the recent changes Google has made in displaying Yelp reviews in Google Places. ... Amazon’s product review content represents a similar proprietary asset and we do not want it to appear in Google Product Search.”).

²²⁶ **GOOGROSE-000078506-08** (2010), at 6 (“We are preparing to remove Amazon’s product reviews since they gave us until Friday of next week.”); **GOOG-Texas-1012889-92** (2010), at 90 (“Amazon – let’s tell Amazon that we were planning to change [the user interface] anyway, but since we are a few weeks away from making revisions and because of [technical uncertainty] we will in the meantime take their content out of Product pages by [date] ... stress that we’re doing this out of respect for the relationship, but that our decision [doesn’t represent a change in policy]”).

²²⁷ Amazon CID Response at 15 (explaining the value of Amazon’s “massive amounts of customer ratings for the millions of products in its catalog” is that “they accurately aggregate customers’ reviews about any given product and enable consumers to quickly assess the perceived quality of a product without having to read often lengthy text reviews”).

²²⁸ *Id.* at 29.

²²⁹ *Id.* at 28-29.

²³⁰ *Id.*

²³¹ Goodrow Tr. 47:2-49:13.

²³² *Id.* at 67:6-68:1.

²³³ *Id.* at 74:5-79:20.

²³⁴ See, e.g., Goodrow Tr. 44:5-46:11 (describing benefit of having a product catalog and that with Froogle, Google tried one method of developing a product catalog, but were not successful in the method that they chose, namely, clustering); **GOOGEC-0134533-631**, at 617 (“We’ve demonstrated that unsupervised clustering doesn’t work.”).

²³⁵ Amazon CID Response at 32-34 (detailing the considerable resources Amazon has expended in developing its comprehensive and user-friendly product catalog of over a billion unique items for sale; efforts include obtaining and developing content from merchants, vendors, and Amazon employees; entering into various types of business relationships to obtain catalog information from merchants and vendors; developing the appropriate

types of data most useful for different types of products (e.g., size, color, and material for clothing versus size and technology type for televisions); spending nine to twelve months to hand curate category or “editorial pages” for users; and investing “very heavily” to ensure that duplicate items within the catalog are combined onto a single page).

²³⁶ See *supra* p. 28 & note 149.

²³⁷ TripAdvisor IR (Jun. 30, 2011 & Jul. 6, 2011) (“Such conduct deters entry and reduces incentives to innovate thereby harming the competitive process”). Economic scholarship consistently suggests that such conduct reduces the victim’s incentives to innovate. See, e.g., William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 JOURN. OF LEGAL STUDIES 325, 328-29 (1989). This is because no one will put the time and effort into developing original content if that content can be effectively appropriated without fair compensation by another company, such as Google.

²³⁸ See Microsoft EC Complaint at 39-51.

²³⁹ Google recognizes the complexity and challenges of optimizing campaigns. See, e.g., <http://www.youtube.com/watch?v=DoJhgoAEqWw> (Google ad for its own campaign management tool, emphasizing the complexities of managing a campaign on multiple advertising platforms).

²⁴⁰ Holden Tr. 12:3-12:20.

²⁴¹ See, e.g., Microsoft IR (Sep. 12, 2011). We are not aware of any advertiser or agency that does not use the API to manage its advertising campaign. See, e.g., Clickable IR (Oct. 24, 2011); Acquisio IR (Sep. 19, 2011).

²⁴² Although Yahoo! has a separate search advertising platform, since 2009 Microsoft’s AdCenter has handled the bulk of search advertising placements for Yahoo!. We understand that, prior to this arrangement, Yahoo!’s Panama search advertising platform maintained its own API for advertiser use. See Yahoo! IR (Sep. 14, 2011).

²⁴³ GOOGKAMA-000005203 (2005); see also GOOGPAGE-000001220-23 (2002), at 20 (initial indication of Larry Page’s go-ahead for the development of the API).

²⁴⁴ See *supra* text accompanying note 21.

²⁴⁵ GOOG-ITA-16-0010341-44 (2008), at 42.

²⁴⁶ See Google API Terms and Conditions, Section I, Definitions, <https://developers.google.com/adwords/api/docs/terms-printable> (last visited Jul. 16, 2012).

²⁴⁷ Google API Terms and Conditions, Sections III.2.c, subsections ii and iii.

²⁴⁸ *Id.* (“This section does not apply to End-advertiser-Only AdWords API Clients”); see also eBay IR (Sep. 15, 2011); Amazon IR (Nov. 18, 2011).

²⁴⁹ An SEM – or search engine marketer – provides tools and services to help advertisers place ads on search engines.

²⁵⁰ See, e.g., GOOGEC-0180810-14 (2010) (Trada); GOOGEC-0180815-16 (2010) (MediaPlex); GOOGEC-0181055-58 (2010) (CoreMetrics); GOOGEC-0181083-87 (2010) (Keybroker); GOOGEC-0182218-330 (2008) (Marin Software).

²⁵¹ Acquisio IR (Sep. 12, 2011); Efficient Frontier IR (Mar. 5, 2012).

²⁵² CX-37 (GOOGWOJC-000031755-64) (2008), at 59 (“Completely holding back the innovation of tools. Their customers are asking ‘why can’t you do this.’ They (the 3rd party and agencies) have to say that their products are limited by Google’s T&Cs”).

²⁵³ GOOGKAMA-000004815 (2004), at 2.

²⁵⁴ Holden Tr. 84:11-25; CX-0037 (GOOGWOJC-000031755-64) (2008), at 59 (“Their customers are saying I want to see all of this together – we (Google) are limiting product development of 3rd party tools”).

²⁵⁵ See Microsoft IR (Sep. 23, 2011); Microsoft IR (Dec. 15, 2011).

²⁵⁶ See Bing, Product Help-adCenter, <http://advertising.microsoft.com/small-business/product-help/adcenter> (last visited Dec. 2011); see also GOOGEC-0180658 (Jan. 14, 2010) (Yahoo!).

²⁵⁷ Response of Google Inc. To the Second Request for Information of the European Commission in Case No COMP/C-3/39.740 *Foundem*; Case No COMP/C-3/39.768 *Ciao*; Case No COMP/C-3/39.775 *eJustice* (Nov. 22, 2010) at ¶92.8, p.7.

²⁵⁸ See GOOGAROR-000018605-16 (2008), at 6 (“Developers need a more flexible and scalable API program”).

²⁵⁹ CX-41 (GOOGFOX-000128077-80) (2009), at 77 (Google study finding that advertisers who use SEM tools have about 13 percent higher spend *growth* than advertisers who only use the AdWords Front End).

²⁶⁰ See CX-42 (GOOGEC-0180380-85) (2008), at 82.

²⁶¹ GOOGKAMA-000005203 (Jan. 18, 2005).

²⁶² Keystone, Advertiser Multi-homing in Online Search Advertising in Europe (June 26, 2011), at 9 (data discussed in the text is U.S. data).

²⁶³ These figures represent the upper bound estimates of the percentage of multi-homing advertisers in each docile. The likely actual percentage will be lower.

²⁶⁴ This is important because the availability of advertisements from smaller advertisers fills out a search engine's coverage of queries, particularly for "tail" queries. *See infra* p. 98.

²⁶⁵ According to Microsoft, approximately 49 percent of keywords with 100 impressions or fewer per month are bid for only on AdWords; for "high scale" keywords, approximately 78 percent are bid for on both AdWords and AdCenter. Susan Athey, Presentation, "The Role of Scale in Competing in Online Search" (March 26, 2012), at 9.

²⁶⁶ *See* Microsoft IR (Jun. 11, 2012). This claim may not stand up to scrutiny, however. Despite numerous requests, Microsoft has not produced data to support this assertion. In addition, it is unclear on what basis Microsoft is able to estimate the level of optimization advertisers perform on their AdWords campaigns.

²⁶⁷ *See* Brew Gadgets IR (Jan. 30, 2012); National Relief IR (Feb. 15, 2012); Phoenix East Aviation IR (Feb. 29, 2012); Speedy Soft IR (Feb. 6, 2012); Top Hat Imagewear IR (Feb. 22, 2012); Yarn Market IR (Jan. 13, 2012). While it is true that some of the small advertisers interviewed were not interested in a cross-platform optimization tool, their limited interest can be explained by unverified assumptions about a cross-platform tool's ultimate functionality and varying opinions on cross-platform management's current transaction costs.

See Ekinoks and Lab Test Florida IR (Feb. 10, 2012); Portadam IR (Feb. 13, 2012); Wyzant IR (Jan. 20, 2012).

²⁶⁸ *See* Green Paper Products IR (Feb. 9 & 10, 2012); Puppet U IR (Jan. 31, 2012); Top Hat Imagewear IR (Feb. 22, 2012).

²⁶⁹ *See* Brew Gadgets IR (Feb. 2, 2012); Top Hat Imagewear IR (Feb. 22, 2012).

²⁷⁰ *See* Phoenix Aviation IR (Feb. 25, 2012).

²⁷¹ **CX-36 (GOOGWOJC-000044501-05)** (2007), at 3; *see also* **GOOGAROR-000007146** (Sep. 25, 2007), at slide 13 (emphasis added).

²⁷² **CX-41 (GOOGFOX-00128077-81)** (2009), at 79.

²⁷³ Holden Tr. 50:3-21.

²⁷⁴ *See id.* at 110, 122-123, 185-186.

²⁷⁵ **CX-40 (GOOG-ITA-25-0064254-55)** (2008), at 54 (emphasis added).

²⁷⁶ **CX-39 (GOOGWOJC-000009350-53)** (2009), at 51.

²⁷⁷ **CX-47 (GOOGECE-0181955-59)** (2009), at 56. Making explicit the connection between the discussion of relaxing the restrictive conditions and contemplated new functionality for DART Search that would otherwise violate those conditions, the engineer responsible for DART Search replied "[w]e aren't ready to build a co-mingling product now." **CX-0046 (GOOGWOJC-000058344-47)** (2009), at 44.

²⁷⁸ **CX-42 (GOOGECE-0180380-85)** (2009), at 84.

²⁷⁹ **CX-43 (GOOGECE-0180407-11)** (2009) at 7.

²⁸⁰ **CX-45 (GOOGECE-0180400-06)** (undated), at 5. Holden was not certain of his response to the original question posed by the API product manager. Holden Tr. 166:12-13. But, he did believe that **CX-0045** was the document presented to Larry Page. Holden Tr. 174:6-20.

²⁸¹ **CX-44 (GOOGWOJC-000059695-97)** (2010), at 95 ("As we expected, Larry was OK with the status quo as outlined in the presentation").

²⁸² *See supra* note 3.

²⁸³ Holden Tr. 175:24-25.

²⁸⁴ **CX-182 (GOOG-ITA-09-0057720)** (2010) (Holden writing to Wojcicki, "We didn't take notes for obvious reasons (hence why I'm not elaborating too much here in email) but happy to brief you more verbally"). This document is an unredacted version of **CX-44 (GOOGWOJC-000059695-97)** (Jan. 21, 2010). During the hearing, counsel for Google indicated that the redaction was improper. Holden Tr. 197:12-24.

²⁸⁵ For a detailed overview of Google's AdSense partners, *see* Appendix 1 (Table listing exclusive agreements) and Appendix 2 (Table listing preferred placement agreements).

²⁸⁶ Google Data Submission (Jul. 31, 2012).

²⁸⁷ Braddi Tr. 22:11-15.

²⁸⁸ In the early 2000s, Google identified these partners as important sources of user traffic because the search bar on the ISP/portal page was the first thing the user often saw when turning on the computer. *See* **GOOGPAGE-000009322** (2004), at 3-24 (discussing Google's ISP access strategy in 2004).

²⁸⁹ See Google Data Submission (Jul. 31, 2012).

²⁹⁰ **GOOGBRAD-000040643-87** (2007), at 45 (Presentation entitled “2008 AdSense Strategy” and describing the first launch of AdSense as being with Earthlink and AOL in 2002.)

²⁹¹ Braddi Tr. 152:5-159:15.

²⁹² **GOOGBRIN-000006008** (2002), at 5 (PowerPoint presentation entitled “Syndication Discussion for Engineers,” describing that winning deals requires paying guarantees to publishers, and that Overture and Google were engaged in “bidding wars” with Overture “paying more than the inventory is worth.”).

²⁹³ Wojcicki Tr. 199:2-15; See also **GOOGBRIN-000006008** (2002) at 6 (explaining high volume of guarantees Google paid to partners to obtain their business).

²⁹⁴ Kapoor Tr. 221:13-222:17.

²⁹⁵ See Braddi Tr. 158:13-159:15 (explaining that, particularly with a guarantee, “it does not make sense to allow more competition on the page”).

²⁹⁶ The revenue share for the standard online agreement is approximately 51 percent, far lower than GSA partners receive. See Google Adwords, What is the AdSense Revenue Share?, <https://support.google.com/adsense/bin/answer.py?hl=en&answer=180195> (last visited Jul. 11, 2012).

²⁹⁷ See Google EC Submission (Sep. 17, 2011), at § 2.23; See also Google EC Submission (Jun. 10, 2011), at § 72.2 (there are more than 1.7 million Standard Online Agreement partners globally); **GOOGBRAD-000050720** (2011), at 3 (Google has globally 360 direct AdSense Partners, the top ten of which contributed 57 percent to Google’s overall AdSense revenue).

²⁹⁸ See Google Data Submission (Jul. 31, 2012).

²⁹⁹ See Appendix 1 (Table listing exclusive agreements) and Appendix 2 (Table listing preferred placement agreements).

³⁰⁰ See Appendix 1 (Table listing exclusive agreements), which describes the exclusivity provisions contained in Google’s direct AdSense agreements. See also e.g., Comcast IR (Nov. 15, 2001) (describing Google’s exclusivity over all AdSense for Search); Demand Media IR (Dec. 9, 2011) (describing that AdSense agreements on designated sites are exclusive); IAC IR (Dec. 8, 2011) (describing Google’s exclusivity with respect third-party provided advertising); AOL IR (Dec. 1, 2011 and Dec. 7, 2011) (describing Google’s exclusivity with respect search and search advertising); Synacor IR (Nov. 29, 2011) (Google has an exclusive for search and search advertising over all the portal properties served by Synacor, including Verizon, and 25 other cable and telecom providers); Target IR (Nov. 4, 2011) (explaining that Target cannot host search advertising from any other provider); New York Times Company IR (Nov. 17, 2011) (Google is the exclusive provider of search and search advertising services); Time Warner Cable IR (Sep. 8, 2011) (Google is the exclusive provider of search and search advertising, and exclusivity prevents TWC from testing rivals, which it would like to do).

³⁰¹ See, e.g., **GOOG-AFS-000000146-218** (2003), at 153 (AOL/Google AdSense Agreement that includes terms of absolute exclusivity preventing AOL from acquiring search and search advertising services from certain identified Google rivals.); **GOOG-AFS-000000219-68** (2010), at 30 (30th amendment to Google/AOL agreement, adding Facebook to the list of excluded rivals); **GOOG-AFS-000000908-86** (2007), at 16 (IAC/Google AdSense Agreement expressing exclusivity on IAC designated as being within the ambit of the agreement).

³⁰² eBay IR (Sep. 15, 2011).

³⁰³ See Appendix 2 (Table listing preferred placement agreements), which describes the preferred placement provisions contained in Google’s direct AdSense agreements.

³⁰⁴ See Letter from Scott Sher, Wilson Sonsini, to Barbara Blank (May 25, 2012) (explaining that, as of the date of the letter, Google was removing the preferred placement clause from the Online Terms and Conditions, and offering no further explanation of this decision). See also Braddi Tr. 182:22-202:20.

³⁰⁵ Amazon IR (Feb. 15, 2012).

³⁰⁶ Business.com IR (Jun. 15, 2012).

³⁰⁷ See, e.g., Demand Media IR (Dec. 9, 2011); Amazon IR (Nov. 18, 2011).

³⁰⁸ Business.com IR (Jun. 15, 2012).

³⁰⁹ Cablevision IR (Jun. 20, 2012); New York Times IR (Oct. 17, 2011) (Microsoft has not reached out to the *New York Times* in an effort to obtain a search syndication deal); Target IR (Nov. 4, 2011) (Microsoft has never expressed interest in a relationship with Target for search syndication); Best Buy IR (Jun. 14, 2012) (Bing has never approached Best Buy).

³¹⁰ Microsoft IR (Jun. 11, 2012).

³¹¹ Wal-Mart IR (May 30, 2012).

³¹² Best Buy IR (Jun. 14, 2012).

³¹³ See Kayak IR (Jun. 20, 2012) (characterizing the ability to serve some Bing or Yahoo advertisements alongside Google search ads as “worthless” because Bing monetizes so poorly in relation to Google).

³¹⁴ IAC IR (Dec. 8, 2012) (Microsoft sought an exclusive deal); Amazon IR (Feb. 15, 2012) (Microsoft and Yahoo! both require page-based exclusivity so their ads cannot be mixed and matched with the advertisements of their competitors.)

³¹⁵ Wal-Mart IR (May 30, 2012); Best Buy IR (Jun. 14, 2012).

³¹⁶ Amazon IR (Feb. 15, 2012). Microsoft and Google apparently do have the ability to provide publishers with technical assistance to avoid duplication, but none of the publishers that identified this concern reported receiving such assistance. See **CX-113 (FTC-0000093-228)** (2008), at 110 (Google/Yahoo! proposed agreement at §2.12, explaining that Google would use “commercially reasonable efforts” to exclude AFS Ads that contain URLs from corresponding results provided by Yahoo!); Microsoft IR (Jul. 20, 2012).

³¹⁷ See, e.g. **GOOGKAPO-000006280-95** (2010), at 83 (discussing revenue improvements from lowering revenue share and standardizing AdSense agreements with publishers.); **CX-102 (GOOGBRIN-000025680-83)** (2008), at 80 (“Our general philosophy with renewals has been to reduce TAC across the board”); **GOOGBRAD-000012890-944** (2007), at 13 (AFS strategy discussed in the 2008 AdSense Business Review, “we are instituting stricter AFS Direct revenue-share tiering guidelines by region... Our overall goal is to achieve better AFS economics for both new and renewing partners.”); **CX-106 (GOOGKAPO-000006280-95)** (2010), at 83 (“2009 Traffic Acquisition Cost (TAC) was down 3 percentage points from 2008 attributable to the application of standardized revenue share guidelines for renewals and new partnerships...”).

³¹⁸ See, e.g. Business.com IR (Jun. 15, 2012); Time Warner Cable IR (Sep. 8, 2011).

³¹⁹ **CX-104 (GOOGBRAD-000048209)** (May 3, 2010), at 4 (Q1 10 Google TAC Summary).

³²⁰ See, e.g., Business.com IR (Jun. 15, 2012); **GOOG-AFS-000004666-68** (2007), at 68; **GOOG-AFS-000000316-27** (Nov. 4, 2010) at 27 (2007 GSA had a 3-tiered revenue share of 80, 85, and 87.5 percent; the 2010 renewal had corresponding tiers of 73, 75, and 77 percent).

³²¹ See, e.g. Time Warner Cable IR (Sep. 8, 2011) (search advertising typically generates revenue well above display advertising).

³²² See, e.g., Comcast IR (Nov. 15, 2011); AOL IR (Dec. 1, 2011); IAC IR (Dec. 8, 2011).

³²³ Best Buy IR (Jun. 14, 2012) (contract is not exclusive); Kayak IR (Jun. 20, 2012) (contract is not exclusive); Amazon IR (Feb. 15, 2012) (contract is not exclusive – Amazon resisted Google’s attempt to impose exclusivity); Wal-Mart IR (May 30, 2012) (describing the contract as not exclusive but noting that Google requires preferred placement if Wal-Mart uses Yahoo! or Microsoft).

³²⁴ See Google Data Submission (Jul. 31, 2012).

³²⁵ eBay IR (Oct. 27, 2011).

³²⁶ *Id.*

³²⁷ *Id.*

³²⁸ *Id.*

³²⁹ *Id.*

³³⁰ *Id.*

³³¹ NexTag IR (May 10, 2011).

³³² *Id.*

³³³ *Id.*

³³⁴ *Id.*

³³⁵ *Id.*

³³⁶ *Id.*

³³⁷ Business.com IR (Jun. 15, 2012).

³³⁸ *Id.*

³³⁹ *Id.*

³⁴⁰ *Id.*

³⁴¹ *Id.*

³⁴² Amazon IR (Feb. 15, 2012).

³⁴³ *Id.*

³⁴⁴ *Id.*

³⁴⁵ *Id.*

³⁴⁶ *Id.*

³⁴⁷ *Id.*

³⁴⁸ *Id.*

³⁴⁹ *Id.*

³⁵⁰ *Id.*

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ IAC IR (Dec. 8, 2012).

³⁵⁴ Google Data Submission (Jul. 31, 2012).

³⁵⁵ IAC IR (Dec. 8, 2012).

³⁵⁶ *Id.*

³⁵⁷ *Id.*

³⁵⁸ *Id.*

³⁵⁹ *Id.*

³⁶⁰ *Id.*

³⁶¹ Microsoft IR (Jun. 11, 2012).

³⁶² *Id.*

³⁶³ IAC IR (Dec. 8, 2011).

³⁶⁴ *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966).

³⁶⁵ *See Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993).

³⁶⁶ *United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001).

³⁶⁷ *Coastal Fuels, Inc. v. Caribbean Petroleum Corp.*, 79 F.3d 182, 197 (1st Cir. 1996).

³⁶⁸ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

³⁶⁹ The fact that horizontal search services are currently provided free-of-charge to end users does not materially impact the analysis here. This is a two-sided market where the service costs to end users have been shifted to advertisers. But advertisers' willingness to bear these costs will be directly impacted by the consumer demand for them. We therefore analyze the cross-elasticity of demand here just as if consumers were directly bearing the costs themselves.

³⁷⁰ *See supra* p. 20-21 & notes 102 and 103. *See also e.g.*, **GOOGEC-0117571** (2009) (Eric Schmidt writes, "Basically google [sic] is not as good as amazon [sic] and its [sic] hard to buy products using Google. This is a huge issue for us as it affects high monetization parts of our business and encourages the development of targeted verticals. Issues include Amazon, MoneySupermarket, Kayak, etc."); **GOOGSCHM-000002688-92** (2009) (evidencing concern that Google is losing queries to vertical properties).

³⁷¹ Brin Tr. 318:7-14 ("[T]hey don't provide the same sort of Web search services but they're nonetheless substitutes for certain classes of queries, and they're widely used").

³⁷² Schmidt Tr. 22:20-24.

³⁷³ Schmidt Tr. 23:19-24:24. *See also* Brin Tr. 86:15-87:1 ("... I think it's important for Google to do well at answering queries across the board. I think that ... the consequences to answering a query poorly could be that, well, maybe people start using Google less for that category of queries, but it could also be that people stop using Google altogether or – you know – they don't necessarily understand the nuances that, you know, it's there three categories we're not good at").

³⁷⁴ *See supra* p. 30 & notes 165 (describing vertical websites' reliance on Google as a main source of traffic).

³⁷⁵ Schmidt Tr. 155:15-21. *See also* Brin Tr. 311:19-312:24 (identifying Bing and Yahoo! as Google's only major web search competitors).

³⁷⁶ **GOOGROSE-000038313-14** (2010), at 13 (reporting monthly shares only for Google, Yahoo and Bing); **GOOGWRIG-000086779-81** (2011) (same); **GOOGMAYE-000013924** (2009) (requesting only data for Google, Yahoo and Bing to calculate market shares for Google's Board of Directors).

³⁷⁷ *See, e.g.* **GOOGROSE-000034628** (2009) (PowerPoint analysis of Bing's traffic, strengths and weaknesses); Brin Tr. 328:23-329:21 (discussing **CX-185**, and noting that he probably received these reports on a quarterly basis).

³⁷⁸ Brin Tr. 319:13-320:15. Brin testified that Google has done some analysis of Facebook and Amazon at some point in the past (although not regularly), and does not recall getting regular reports on any other vertical competitor. According to Brin, "it's definitely [a] much harder comparison to make." Brin Tr. 331:15-22.

³⁷⁹ See Department of Justice, Recommendation to Challenge Google/Yahoo Services Agreement, 39 (Sep. 22, 2008) ("[u]sers do not substitute foreign search engines for U.S. engines, because foreign engines are not designed to deliver relevant information for a U.S. user"). See also Microsoft EC Submission 86 (noting that the relevant markets at issue in this investigation should be defined by "national or linguistic boundaries").

³⁸⁰ See Press Release, comScore, comScore Releases May 2012 U.S. Search Engine Rankings (Jun. 22, 2012) http://www.comscore.com/Press_Events/Press_Releases/2012/6/comScore_Releases_May_2012_U.S._Search_Engine_Rankings. Google's market share has been measured as a share of the total volume of unique searches in the United States conducted across traditional search engines, as well as other "leading" sites such as Facebook and Wikipedia. Google's internal figures reflect slightly higher market shares for Google, see, e.g., **CX-183 (GOOGWRIG-000086779-81)** (2011) (reporting monthly market shares in Google's internal metrics ranging between 69.4 and 83.5 percent, while the equivalent comScore number for the same period is 65.1 percent). According to Sergey Brin, Google relies on both internal and external data sources when examining its market shares, although all of the sources "have their problems, their challenges." Brin Tr. 315:9-316:2. Brin testified that he is more concerned with whether all of the data sources are consistent in their "trends," i.e., whether Google's share is going up or down, than the exact numbers. Brin Tr. 321:11-23.

³⁸¹ See Brad Stone & Brett Pulley, *IAC's Barry Diller Surrenders to Google, Ends Ask.com's Search Effort*, Bloomberg, Nov. 9, 2010, <http://www.bloomberg.com/news/2010-11-09/iac-s-diller-surrenders-to-google-juggernaut-ends-ask-com-search-effort.html>.

³⁸² Google has an intermediation agreement with AOL, whereby Google provides AOL with Google search and search advertising functionality. Microsoft EC Submission at 23.

³⁸³ See Press Release, comScore, comScore Releases May 2012 U.S. Search Engine Rankings (Jun. 22, 2012) http://www.comscore.com/Press_Events/Press_Releases/2012/6/comScore_Releases_May_2012_U.S._Search_Engine_Rankings.

³⁸⁴ This number should be viewed with some caution, both because there can often be shifts of a percent or two in the monthly comScore data, and also because there is really no good way to measure search share with high precision. All of the measures of search share have various methodological problems and limitations. See, e.g. Brin Tr. 315:9-316:2 (noting that all of the internal and external market share numbers have issues); Schmidt Tr. 53:10-55:2 (noting that Google's view is that comScore numbers are always wrong); but see **GOOGMANB-000095004-07** (2011), at 4 (Hal Varian, Google's chief economist, writes: "Though I would agree that ComScore is unreliable, it's not at all obvious to me that this matters much to us. From an antitrust perspective, I'm happy to see them underestimate our share.")

³⁸⁵ See Press Release, comScore, comScore Releases May 2012 U.S. Search Engine Rankings (Jun. 22, 2012) http://www.comscore.com/Press_Events/Press_Releases/2012/6/comScore_Releases_May_2012_U.S._Search_Engine_Rankings.

³⁸⁶ Microsoft IR (Jun. 11, 2012).

³⁸⁷ *Id.*

³⁸⁸ See *Bepco, Inc. v. Allied-Signal, Inc.*, 106 F. Supp. 814, 830 (M.D.N.C. 2000) (70-75 percent). See also, e.g., *Exxon Corp. v. Berwick Bay Real Estate Partners*, 748 F.2d 937, 940 (5th Cir. 1984) (per curiam) ("monopolization is rarely found when the defendant's share of the relevant market is below 70%"); *Colo. Interstate Gas Co. v. Natural Gas Pipeline Co. of Am.*, 885 F.2d 683, 694 n.18 (10th Cir. 1989) (in order to establish monopoly power, "lower courts generally require a minimum market share of between 70% and 80%") (internal citation omitted).

³⁸⁹ See, e.g., *Oahu Gas Service, Inc. v. Pacific Resources, Inc.*, 838 F.2d 360, 366 (9th Cir. 1988) (affirming jury finding that defendant had monopoly power despite steadily declining market share from 100 percent to 68.2 percent at time of lawsuit). While Judge Learned Hand was "doubtful whether sixty or sixty-four percent would be enough," see *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 424 (2d Cir. 1945), and the Third Circuit has suggested that "a share significantly larger than 55% has been required to establish prima facie market power," *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 187 (3d Cir. 2005), no minimum threshold has ever been established. See *Broadway Delivery Corp. v. United Parcel Serv. of Am.*, 651 F.2d 122, 130 (2d Cir. 1981), cert. denied, 454 U.S. 968 (1982) (holding that, while, "[s]ometimes, but not inevitably, it will be useful to suggest that a market share below 50% is rarely evidence of monopoly power, a share between 50% and 70%

can occasionally show monopoly power, and a share above 70% is usually strong evidence of monopoly power . . . the jury should not be told that it must find monopoly power lacking below a specified share or existing above a specified share”); *Yoder Bros., Inc. v. Cal.-Fla. Plant Corp.*, 537 F.2d 1347, 1367 n.19 (5th Cir. 1976) (rejecting “rigid rule require 50% of the market for a monopolization offense without regard to any other factors”). However, “it would be rare indeed to find that a firm with half of a market could individually control price over any significant period.” Areeda & Hovenkamp, ANTITRUST LAW (“Areeda & Hovenkamp”) ¶ 532c.³⁹⁰ We are aware that BE has recently conducted an empirical analysis of this issue, and reaches a different conclusion based on the fact (as we understand it) that, as search advertising impressions increase modestly, impressions of display advertisements decrease slightly. See Christopher Adams, Determining Market Definition for Search Advertising (Jul. 16, 2012) (draft).

³⁹¹ **GOOG-ITA-20-0165245-55** (2010), at 47; **CX-116 (GOOG-Texas-1486915-70)** (2009), at 18-20 (in describing online advertising, depicting awareness, intent, decision, action on a continuum with display and branding at the top, and direct response with search engines at the bottom); see, **FTCNext-00000002** (2012), at 36.

³⁹² Wojcicki Tr. 60:20-61:16; but see **GOOG-ITA-20-0165245-55** (2010), at 51-52 (there is an ongoing desire by Google and others to compare media effectiveness across platforms, but such comparisons are not available yet).

³⁹³ The screenshot is from the website AdExchanger.com, Yahoo! Starts Retargeting Search with Display Ads, <http://www.adexchanger.com/ad-exchange-news/yahoo-starts-retargeting-search-with-display-ads/> (last visited Jul. 17, 2012).

³⁹⁴ Fox Tr. 106: 23-107:13; Schmidt Tr. 128:18-129:5; Wojcicki Tr. 18:24-22:20 (search and display are “different types of inventory into which Google delivers ads.”); Walmart IR (Jan. 23, 2012); Verizon IR (Nov. 1, 2011); EAS IR (Dec. 23, 2012); Priceline IR (Oct. 18, 2011) (Mostly we think offline is better for building brand, so we use online display for generating sales.).

³⁹⁵ **GOOGFOX-000120663-70** (2008), at 63.

³⁹⁶ Wojcicki Tr. 60:20-61:16 (“They are such different products that you do not measure them against one another and the technology behind the products is different”); *id.* at 39:17-25 (“Search advertising is not contextual advertising or general brand advertising”); Fox Tr. 222:9-16 (testifying that his familiarity with display advertising comes from the display ads team).

³⁹⁷ Dicit.com IR (Dec. 27, 2011); Wal-Mart IR (Jan. 23, 2012); Reach Local IR (Jan. 12, 2012); Facebook IR (Jan. 24, 2012) (stating that Facebook sees its advertising as driving “the top of the funnel”); **FTC-EBAY-00000002** (2012), at 31 (describing search advertising as uniquely responding to user’s express interest whereas display is designed to build brand awareness).

³⁹⁸ Wojcicki Tr. 31:17-32:1 (“Search advertising is delivered in a text format and display is a different format of advertising”); Schmidt Tr. 128:21-22 (“As a general rule the two [search and display] are reasonably different”); **FTCNext-00000002** (2012), at 36 (search provides valuable information unique to that form of advertising).

³⁹⁹ See, e.g., Acquisio IR (Sep. 12, 2011); Havas IR (Oct. 5, 2011); Kayak IR (Dec. 20, 2011); Efficient Frontier presentation to SMX 2010 (Mar. 5, 2010) (explaining that display and search are complements because simultaneous use increases clicks more than the sum of just search or display separately) Slideshare.net, Search Marketers Get Ready Display is a Performance Channel, <http://www.slideshare.net/efrontier.com/search-marketers-get-ready-display-is-a-performance-channel> (last visited Jul. 16, 2012).

⁴⁰⁰ **CX-190 (GOOGSCHM-000005375-77)** (2008), at 75; Varian Tr. 93:12-95:21.

⁴⁰¹ See, e.g., Fox Tr. 220:6-221:3 (testifying that he now understands there is a more of direct response component to our display network. There is less of a distinction between search for direct response and display for brand response.); **CX-123 (GOOGFOX-000055480-89)** (2010), at 85.

⁴⁰² RBB Economics, *Substitutability of Different Forms of Online Advertising*, at 9-11, 15-16, Google Submission (Jul. 22, 2011) (White Paper discussing the ability of search ads to promote brands and display ads to elicit direct responses); Fox Tr. 96:22-97:6, 98:14-25, 102:15-23; 109:6-11 (testifying that advertisers wanting direct response would use both display and search and that advertisers wanting to promote a brand would use both search and display.)

⁴⁰³ Wojcicki Tr. 31:17-32:1 (“Search advertising is delivered in a text format and display is a different format of advertising.”)

⁴⁰⁴ See, e.g., Amazon CID Response at 38; Clickable IR (Oct. 24, 2011); Living Social IR (Mar. 3, 2011). See also, e.g., Brin Tr. 178:5-21 (testifying that search ads convert much better than other types of advertising); Schmidt Tr. 125:21-126:9 (same); **GOOG-ITA-03-0045511-18** (2009), at 13 (“Content conversions do not lead to sales like search conversions,” attributing the difference to where display reaches users in the buying cycle versus where search reaches users in the buying cycle); **GOOG-ITA-13-0000937-41** (2009), at 37 (Hal Varian stating, “don’t lump search advertising in with everything else – treat it as a separate category,” further noting that the recession has cut far more significantly into display conversions than into search ad conversions).

⁴⁰⁵ Gian Fuglioni, *Who Will Rid us of this Meddlesome Click?*, comScore, Dec. 7, 2010, http://blog.comscore.com/2010/12/rid_meddlesome_click.html (“The average click rate (defined as the percent of paid ads that were clicked on) for paid search campaigns (3.5%) is massively (35x) higher than for display ad campaigns”).

⁴⁰⁶ See *supra* p. 9-11 & notes 43-48.

⁴⁰⁷ **FTC-EBAY-00000002** (2012), at 31; Amazon CID Response at 38.

⁴⁰⁸ Booyah IR (Jan. 25, 2012); Comcast IR (Nov. 15, 2012); iCrossing IR (Apr. 9, 2012) (search advertising is alone at the bottom of the marketing funnel, keyed to user intent); Core-Metrics (IBM) IR (Nov. 4, 2011); Comcast IR (Nov. 15, 2011); Priceline IR (Oct. 18, 2012) (search has surgical precision and is unlike other advertising); Amazon CID Response at 38.

⁴⁰⁹ Brin Tr. 178:16-21 (search ads convert much better than other types of ads); **GOOG-ITA-03-0045511-18** (2009), at 16 (“content conversions do not lead to sales like search conversions”); **GOOG-ITA-01-0364176-205** (2010), at 95 (a picture depicting a hierarchy of conversion attribution placing paid search at the top followed by organic search, display, affiliates, social networks, email marketing, direct visitation, and offline); Group M IR (Oct. 11, 2011) (contextual advertising is better than display, but not as effective as search at generating conversions).

⁴¹⁰ Brin Tr. 181:2-8 (“[Y]our average content page view is worth significantly less than your average search page, no question about it.”); Schmidt Tr. 129:6-130:5 (testifying that for advertisers that want to generate sales, their money should go to search advertising first and then other forms of online advertising and then offline advertising “[s]o the general feeling – and again this is confirmed by experience – is that you would always put text ads first and then display second which is still online.”).

⁴¹¹ Amazon CID Response at 38 and Table 9.2. See also e.g., Living Social CID Response at 16 (no substitute for search advertising); Group M IR (Oct. 11 2011); eBay IR (Nov. 4, 2011); Didit.com IR (Dec. 27, 2012); IAC IR (Dec. 8, 2011); AOL IR (Dec. 9, 2011); Demand Media IR (Dec. 9, 2011); Kayak IR (Dec. 20, 2011).

⁴¹² See, e.g., Demand Media IR (Dec. 9, 2011) (price increase will not cause shift to other forms of advertising); EAS IR (Feb. 24, 2012) (same); Kayak IR (Dec. 20, 2011) (price increase would not cause Kayak to spend less on search advertising); Booyah IR (Jan. 25, 2012) (if prices went up 10 percent on Google paid search, the advertiser would not like it, but would pay it); Clickable IR (Oct. 24, 2011) (cannot divert advertising dollars from Google to other platforms); Wyzant IR (Jan. 20, 2012) (would pay an increase of 10 percent rather than shift spend away from Google Adwords); Comcast IR (Nov. 15, 2011) (it would take a price increase of more than 50 percent to move any money from search advertising).

⁴¹³ Living Social CID Response at 16; Didit Draft Decl. (2008) (would affirm to the principle that there are “no good substitutes for paid search” in 2012); Amazon CID Response at 38-39; **FTC-EXPE-00000002** (2012), at 15-16.

⁴¹⁴ Living Social CID Response at 16.

⁴¹⁵ Apollo IR (Jan. 4, 2012); Fox Studios IR (Jan. 20, 2012); Havas IR (Oct. 5, 2012); Sound World Instruments IR (Jan. 24, 2012). Generally speaking, it was difficult for many advertisers to answer the hypothetical – “what would you do in the face of an across-the-board price increase?” – because of the unique manner in which search advertising is priced. Pricing of search advertising is based on what is known as a “Vickrey second auction” model. The idea behind this auction is to give advertisers the incentive to bid their maximum bid, rather than try to game the auction to pay as little as possible. In this type of auction, an advertiser is only required to pay \$.01 more than the next lowest bidder. For example, three sports retailers are bidding on the keyword “sneakers.” Retailer A bids a maximum of \$1.00; Retailer B bids \$0.50; and Retailer C bids \$0.25. All other things being equal (*i.e.*, controlling for Google’s quality score adjustments), Retailer A will “win” the top spot in the auction, but will only pay \$0.51 to Google if a user clicks on Retailer A’s ad. In this way, the auction itself drives up the prices, and Google’s “control” of prices is more indirect (although Google sets minimum bids and establishes quality scores that sets each advertiser’s baseline bid). Notably, each time a

query is entered, the auction occurs in real time, so in theory, an advertiser could be participating in thousands of auctions simultaneously on millions of keywords, and could pay vastly different prices for different keywords, or groups of keywords, at any given time.

⁴¹⁶ **CX-123 (GOOGFOX-000055480-89)** (2010), at 87 (Google, Inc. Citi Technology Conference, Sep. 8, 2010. (Interview with Nick Fox) (Google “see[s] different types of dollars on the display network than we see on search”)); Varian (Google-Yahoo 2008) Tr.135:23-136:9, 212:20-213:4 (testifying that a rational advertiser would spend to his marginal benefit on Google regardless of the economics of advertising elsewhere).

⁴¹⁷ Schmidt (Google-Yahoo 2008) Tr. 90; *see also* Schmidt Tr. 129:6-130:5 (“always put text ads first and then display second”); *id.* at 123:13-15 (“your best sales dollar goes to Google [search ads]”).

⁴¹⁸ Schmidt Tr. 129:17-19.

⁴¹⁹ Statement of Federal Trade Comm’n Concerning Google/DoubleClick, FTC File No. 071-0170 (2007), 3-7

⁴²⁰ Department of Justice, Recommendation to Challenge Google/Yahoo Services Agreement, 19-20, 33-38 (Sep. 22, 2008); Department of Justice, Statement of the Department of Justice Antitrust Division on Its Decision to Close Its Investigation of the Internet Search and Paid Search Advertising Agreement Between Microsoft Corporation and Yahoo! Inc. (Feb. 18, 2010).

⁴²¹ 345 U.S. 594 (1954).

⁴²² 345 U.S. at 610.

⁴²³ For newspaper markets, *see U.S. v. Citizen Pub. Co.*, 280 F. Supp. 978, 984-92 (D. Ariz. 1968), *aff’d* 394 U.S. 131 (1969); *Community Publishers, Inc. v. Donrey Corp.*, 892 F. Supp. 1146, 1155-57 (W.D. Ark 1995) *aff’d*, 139 F. 3d 1180 (8th Cir. 1998). *See also National Collegiate Athletic Ass’n v. Board of Regents of the Univ. of Oklahoma*, 468 US 85 (1984) (analyzing a distinct market for advertising on televised football games); *TV US v. News Corp.*, No. Civ.A.010771, 2001 WL 34038354, at *9 (defining television advertising as a separate market); *ad-vantage tel. Directory Consultants, Inc. v. GTE Directories Corp.*, 849 F. 2d 1336 (11th Cir. 1987) (affirming that advertising in telephone directories is a proper market). Indeed, courts have found even narrower markets within newspapers. *See, e.g., Advo, Inc. v. Philadelphia Newspapers, Inc.*, 51 F. 3d 1191, 1192-91 (3d Cir. 1995) (finding circulars are a valid submarket because circular ads are better than standard newspaper ads in geographic targeting, specifically in chosen neighborhoods).

⁴²⁴ *Person v. Google*, 2007 U.S. Dist. LEXIS 22499 (N.D. Cal. March 16, 2007). *See also America Online, Inc. v. GreatDeals.Net*, 49 F. Supp. 2d 851 (E.D.V.A. 1999) (a case from the earliest days of the Internet that did not find email advertising to be a distinct relevant market.).

⁴²⁵ *Person*, 2007 U.S. Dist. LEXIS 22499. *See also Kinderstart.com LLC., v. Google, Inc.*, 2007 U.S. Dist. Lexis 22637, *16 (N.D. Cal. Mar. 16, 2007) (in a second opinion issued on the same day as *Person*, Judge Vogel opined, in dicta, that had plaintiff defined a two sided market made up of search and search advertising, that market would have been doomed to fail because search advertising would not be sufficiently distinguishable from other forms of online advertising).

⁴²⁶ *See supra* p. 67 (relevant geographic market for horizontal search is limited to the United States). *See also* Department of Justice, Recommendation to Challenge Google/Yahoo Services Agreement, 39 (Sep. 22, 2008) (“advertising on search platforms outside the United States is not an effective alternative for advertisers wishing to target potential consumers within the United States”); Varian Tr. 205:10-18, 212:20-22 (testifying that Google measures the effects of tuning the ad auction and other experiments at the country level); *see also* Microsoft EC Submission 86 (noting that the relevant markets at issue in this investigation should be defined by “national or linguistic boundaries”); Varian Tr. 201:16-25, 202:18-21 (explaining that the location of the user is the most important).

⁴²⁷ Search Ignite.com, Q2 2010 U.S. Search Market Report (report tracking search advertising share in terms of revenue that looked at 55 billion impressions and more than 1 billion clicks across engines over 4 years concluded that Google ended up with a high-share of 80 percent of the pay per click ad spend in 2010) *discussed in GOOGPAGE-000004936-40* (2010), at 36; Michael Liedtke, *Microsoft Takes \$6.2 Billion Hit On aQuantive Online Ad Woes*, Huffington Post, Jul. 2, 2012, http://www.huffingtonpost.com/2012/07/03/microsoft-aquantive-online-ads_n_1645696.html (estimating Google’s 2011 search advertising market share to be 78%); Covario.com, Covario Finds High Tech Global Paid Search Spend Rose 22 Percent in Q1 over the Same Period Last Year, <http://www.covario.com/news-and-views/newsroom/press-releases/515-covario-finds-high-tech-global-paid-search-spend-rose-22-percent-in-q1-over-the-same-period-last-year-> (last visited Jul. 16, 2012) (estimating Google’s share of search advertising market to be at 76 percent). *See also* Stephanie Reese, *Quick Stat: Yahoo!’s Share of Search Ad Market to Fall*

to 8.1% This Year, Emarketer.com, Mar. 23, 2011, <http://www.emarketer.com/blog/index.php/quick-stat-yahoos-search-ad-revenue-share-fall-81-year/> (Emarketer.com estimates Google's share to be 70 percent in 2010 and 80 percent in 2011); See ADV Media Productions, Google Dominates Search Advertising With 80% Market Share Unaffected by The Rise of Bing, <http://www.advmediaproductions.com/blog/google-dominates-paid-search-advertising-with-80-market-share-unaffected-by-the-rise-of-bing/> (last visited Jul. 16, 2012). See also **GOOGMAYE-000035824** (2009), at 8 (in 2009 Google estimated its market share 71.3 percent). We understand that BE Staff may be measuring Google's share of the search advertising market based on ad clicks or impressions. We are unclear as to why BE would rely on this metric because a click on an ad does not actually tell you anything about how much an advertiser is spending on any given ad on any given platform. The logical metric for estimating advertising share is advertiser spend (or advertising revenues), which is the metric relied upon by all of the industry sources (see above) – and Google itself. See, e.g., **CX-116 (GOOG-Texas-148915-70)** (2009), at 19-20 (evaluating “market share by size of ad revenue captured”).

⁴²⁸ Google Data Submission (Jan. 10, 2012) (listing 1,280,983,000 advertisers in 2011).

⁴²⁹ Michael Liedtke, *Microsoft Takes \$6.2 Billion Hit On aQuantive Online Ad Woes*, Huffington Post, Jul. 2, 2012, http://www.huffingtonpost.com/2012/07/03/microsoft-aquantive-online-ads_n_1645696.html (attributing the growth to loss of share to Yahoo with Microsoft holding steady at 7 percent); Covario.com, Covario Finds High Tech Global Paid Search Spend Rose 22 Percent in Q1 over the Same Period Last Year, <http://www.covario.com/news-and-views/newsroom/press-releases/515-covario-finds-high-tech-global-paid-search-spend-rose-22-percent-in-q1-over-the-same-period-last-year-> (last visited Jul. 16, 2012) (estimating Microsoft and Yahoo!'s share of search advertising market to be a combined 13 percent). The remaining 4-12 percent of the search advertising market appears to be controlled by AOL and Ask, both powered by Google.

⁴³⁰ Microsoft Data Submission (Sep. 23, 2011) (listing 313,345 total advertisers in 2011).

⁴³¹ Notably, while Bing and Yahoo! operate a joint search and search advertising network, they service syndication clients separately. According to Microsoft, this is a vestige of Yahoo!'s many relationships with website publishers prior to merging its main search and advertising operations with Microsoft. Microsoft IR (Jun. 11, 2012).

⁴³² See, e.g., IAC IR (Dec. 8, 2011); Earthlink IR (May 23, 2012); Amazon IR (Feb. 15, 2012).

⁴³³ See, e.g., AOL IR (Dec. 1, 2011); Earthlink IR (May 23, 2012).

⁴³⁴ See, e.g., Amazon IR (Feb. 15, 2012); AOL IR (Dec. 1, 2011).

⁴³⁵ See, e.g., Cablevision IR (Jun. 20, 2012); Business.com IR (Jun. 15, 2012).

⁴³⁶ See, e.g., Cablevision IR (Jun. 20, 2012); Business.com IR (Jun. 15, 2012).

⁴³⁷ Department of Justice, Recommendation to Challenge Google/Yahoo Services Agreement, 54-55 (Sep. 22, 2008). The Department of Justice defined “search syndication” to include both syndicated search and search advertising, wherein intermediaries such as Google struck agreements with website publishers to provide both functionalities. *Id.*

⁴³⁸ See *supra* p. 67 (relevant geographic market for horizontal search is limited to the United States) and p. 73 (same for search advertising). See Department of Justice, Recommendation to Challenge Google/Yahoo Services Agreement, 39 (Sep. 22, 2008) (“[u]sers do not substitute foreign search engines for U.S. engines, because foreign engines are not designed to deliver relevant information for a U.S. user”). See also Microsoft EC Submission 86 (noting that the relevant markets at issue in this investigation should be defined by “national or linguistic boundaries”). None of the parties have challenged the relevant geographic market.

⁴³⁹ 2011 comScore qSearch20 Report. Amazon query volume has been allocated between Google and Microsoft according to the division described by the company. See Amazon IR (Nov. 18, 2011). Queries on Craigslist.org have been removed from the dataset because the site does not host either web search or search advertising. There are some significant inconsistencies in our datasets. Figures provided by Microsoft for Yahoo!'s syndication query volume are staggeringly inconsistent with comScore's data (107 billion in Microsoft's data set v. 2.7 billion in comScore). We are trying to get to the bottom of this discrepancy now, but understand that Yahoo!'s internal data may take into account so-called “phantom” queries (instances where a user hovers over a word in text and a link or ad appears), which would account for the discrepancy. Google's market share would be considerably smaller taking into account the Yahoo! figure provided by Microsoft. However, we have reason to question the Yahoo! figure because it is inconsistent with the industry understanding of Google's dominance in this area. See Appendix 3 for a detailed explanation of how Staff calculated the relevant market shares using comScore's dataset.

⁴⁴⁰ 2011 comScore qSearch20 Report. The remaining 3 percent is, most likely, allocated among the three firms in roughly the same proportion as the 97 percent of the market we have been able to identify. *See* Schmidt Tr. 175:11-176:12 (Google's former CEO identifying Google and Microsoft as the providers of search syndication, then testifying that there must be some smaller, additional providers out there but that he doesn't know any of their names.) Unfortunately, limitations in the available data make it impossible to allocate conclusively the remaining query volume among syndication providers. As noted earlier, *supra* note 439, there are also some significant inconsistencies in our existing datasets, described in detail in Appendix 3 (describing the limitations of Staff's datasets from comScore and the parties).

⁴⁴¹ *See, e.g.*, Brin Tr. 339:14-23 (testifying that Google indexed over 200 billion documents "years ago," and he has since lost count); Microsoft IR (Jul. 20, 2012); Microsoft IR (Jul. 24, 2012). *See also* U.S. Department of Justice, Google/Yahoo Services Agreement: Recommendation to Challenge, 40-42 (Sep. 22, 2008).

⁴⁴² *See, e.g.*, Brin Tr. 339:24-340:1 (technology expertise is a major factor in building a search engine). Sergey Brin testified that Google employs some 10,000-15,000 engineers, with at least 1,000 devoted exclusively to search. Brin Tr. 340:2-8. *See also* U.S. Department of Justice, Google/Yahoo Services Agreement: Recommendation to Challenge, 40-42 (Sep. 22, 2008).

⁴⁴³ *See, e.g.*, Schmidt Tr. 97:12-98:23 (testifying that Google's substantial infrastructure is a "significant advantage because it allows us to serve queries – less expensively"); Brin Tr. 337:15-20 (agreeing that a new entrant would need substantial server capacity); Microsoft IR (Apr. 7, 2011); Microsoft IR (Jul. 20, 2012).

⁴⁴⁴ Google 10-K at 24. Sergey Brin testified that the figure was something around \$1 billion dollars. Brin Tr. 342:5-6.

⁴⁴⁵ *See* Nadella Decl. at 4 ¶ 10(d).

⁴⁴⁶ *See supra* p. 16.

⁴⁴⁷ *See* Nadella Decl. at 4 ¶ 10(d) (losses of \$1.7 billion in FY 2009, \$2.5 billion in FY 2010); Microsoft IR (Jul. 20, 2012) (losses of \$2 billion in FY 2011; \$1.5 billion in FY 2012).

⁴⁴⁸ *See* Microsoft IR (Jul. 20, 2012) (Bing cannot continue to sustain these losses over the next few years and remain a viable operation within Microsoft).

⁴⁴⁹ *See* Microsoft EC Submission 64 n.224 & 77-78.

⁴⁵⁰ *See id.* Microsoft has conducted studies suggesting that users who use Bing's vertical websites are far more likely to use Bing as their general search engine of choice than are other users. *Id.*

⁴⁵¹ *See* Microsoft EC Submission 64 n.224.

⁴⁵² *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 605 n.32 (1985) (citations omitted).

⁴⁵³ *See Microsoft*, 253 F.3d at 79 (plaintiff must show that the conduct is "the type of conduct that is reasonably capable of contributing significantly to a defendant's continued monopoly power").

⁴⁵⁴ *Id.* at 65.

⁴⁵⁵ *Id.* at 65-66. *See also e.g., Xerox Corp. v. Media Sciences Int'l, Inc.*, 511 F.Supp.2d 372, 387-89 (S.D.N.Y. 2007) (denying motion to dismiss counterclaim that Xerox purposely redesigned its printers and replacement ink sticks to preclude competition in the market for replacement ink sticks); *Melanie Tucker v. Apple Computer, Inc.*, 493 F.Supp.2d 1090, 1099-1101 (N.D. Cal. 2006) (denying motion to dismiss claim that Apple purposely designed iPod player and iTunes music files to be incompatible with competitors' music files and players, respectively).

⁴⁵⁶ This is the most friendly legal framework. Under the Ninth Circuit's *Allied Orthopedic* framework, if Google can show *any* objective "improvement" to its product, there will be no balancing of harm to competition and procompetitive justifications. *See Allied Orthopedic Appliances, Inc. v. Tyco Health Care Group LP*, 592 F.3d 991, 998-99 (9th Cir. 2010). The Ninth Circuit has also, on occasion, applied a "refusal to deal" analysis to these types of product improvement cases. *See, e.g., LiveUniverse, Inc. v. MySpace, Inc.*, 2007 U.S. Dist. Lexis 43739 (C.D. Cal. 2007) (no duty to deal with rival where defendant redesigned its platform so that links to rival's website no longer functioned and where it blocked users from embedding links to rival's website in their profiles), *aff'd*, 304 Fed. Appx. 554 (9th Cir. 2008) (unpublished op.). This would clearly be problematic for the Commission, *see infra* p.84 & note 483 (discussing whether Google has a duty to deal in the context of a search biasing complaint).

⁴⁵⁷ **GOOG-ITA-13-0001313-16** (2009), at 14. *See also e.g., GOOG-Texas-0213904-08 (2009), at 5 ("There is currently a concern that the query mix is shifting to being less commercial, that queries in certain verticals (e.g. finance, retail) are growing more slowly than our overall traffic, and that we are getting higher percentages of navigational queries (up to 55-70% for shopping, jobs, finance, vehicle in the UK, for example). More users*

may be going directly to vertical sites, and if the queries we are losing are commercial in nature, this may be a reason for RPM declines”); **GOOGFOX-000025766** (undated), at 16 (In the UK, “Google losing 3-4% of rev share p.a. to aggregators. . . . Aggregators instigating more sales. . . . Aggregators growing much faster than Google. Potential lost revenue in UK > \$100 million by 2012). See also e.g., Brin Tr. 58:7-19 (“. . . if we’re serving our users poorly in whatever subsets of queries, we would definitely face significant revenue erosion as we got less usage.”); Schmidt Tr. 160:25-161:10, 226:10-228:25, 229:23-230:25, 234:13-234:22, 235:2-235:8, 236:20-237:5, 294:1-295:18 (“. . . it’s opportunity lost. . . And in our industry, it’s important to do very well. . . There was a concern that the aggregators were doing a good job in an area where we were not as – doing a good enough job . . . We want to compete. So that drove a – a discussion.”).

⁴⁵⁸ See Microsoft Corp., Microsoft Complaint to the European Commission (Mar. 31, 2011). This theory directly tracks the Department of Justice’s theory on the role of middleware in *Microsoft*. There, it was argued, middleware represented a threat to Microsoft’s operating system dominance not because the middleware would *itself* replace the underlying operating system, but because middleware provided an alternative platform onto which applications could be written, which could be run irrespective of the underlying operating system. Lowering this so-called applications barrier to entry, in turn, lowered the costs for other firms to introduce rival operating systems that *could* directly challenge Microsoft’s dominance over Intel-compatible operating systems. Similarly, here, Microsoft argues that a “key component” of its strategy in attracting users has been to partner with vertical websites so that Bing can offer a “differentiated general search experience to compete with Google.” *Id.* See also e.g., **GOOG-Texas-1325832-33** (2010), at 33 (“Bing has explicitly made improving verticals a key part of their strategy to beat Google”); **GOOG-ITA-01-0331214** (2009) (email noting that Bing is focused on competing against Google in its “two top verticals,” shopping and travel).

⁴⁵⁹ While reduced innovation is at the heart of this theory, the role of pricing cannot be ignored, in that (as with other theories described later in this memorandum), the broader availability of alternative search advertising platforms would operate as a constraint on Google’s ability to raise prices to its advertisers.

⁴⁶⁰ See *supra* p. 30.

⁴⁶¹ See *supra* p. 30-31.

⁴⁶² In *Microsoft*, the government’s argument that product improvement could be outweighed by anticompetitive effects did not fare well. The *en banc* court considered a claim that Microsoft had designed certain software in a way that made Java applications both faster on its operating system and incompatible with rival operating systems. Although the opinion stated that the applicable test was that “the incompatible product must have an anticompetitive effect that outweighs any procompetitive justification for the design,” it held that the fact that product ran faster on Microsoft machines sufficed to make it legal standing alone and did not appear to try to balance that benefit against anticompetitive effects. *Microsoft*, 253 F.3d at 74-75. Similarly, while the D.C. Circuit upheld the lower court’s ruling against Microsoft on the company’s efforts to integrate the Internet browser with the operating system, it did so on particular integration aspects for which Microsoft could provide no justification. Where Microsoft did provide a justification (namely, in overriding users’ choice of a default browser), the court found no liability. 253 F.3d at 67-68.

⁴⁶³ See Response of Google to DG Comp (Jul. 1, 2011), at 2.

⁴⁶⁴ See Shashi Seth, *Beyond the Search Box*, Yahoo Search Blog, Jun. 10, 2010, <http://www.ysearchblog.com/2010/06/10/beyond-the-search-box/>. (“People no longer search to find a list of blue links; they search to find answers in the shortest amount of time possible. We believe that surfacing the right information at the right time is more important than the number of total results delivered or number of traditional queries conducted”); Greg R. Notess, *Microsoft’s New Bing – The ‘Decision Engine*, Information Today Inc., Jun. 8, 2009, <http://newsbreaks.infotoday.com/NewsBreaks/Microsofts-New-BingThe-Decision-Engine-54514.asp>. (noting that Microsoft rebranded its MSN search engine as Bing in 2009, dubbed it the “decision engine,” and began incorporating universal blends similar to those used by Google and Yahoo!).

⁴⁶⁵ Google Search Innovation White Paper at 56-58.

⁴⁶⁶ *Id.* at 40.

⁴⁶⁷ The OneBox, predecessor to the Universal Search “blend,” showcased Google’s vertical content in a box at the top of the Google search results page. See *id.* at 34-45.

⁴⁶⁸ PageRank “relies on the uniquely democratic nature of the web by using its vast link structure as an indicator of an individual page’s value. In essence, Google interprets a link from page A to page B as a vote, by page A, for page B. But, Google looks at considerably more than the sheer volume of votes, or links a page receives; for example, it also analyzes the page that casts the vote. Votes cast by pages that are themselves “important”

weigh more heavily and help to make other pages ‘important.’ Using these and other factors, Google provides its views on pages’ relative importance.” Danny Sullivan, *What is Google PageRank?*, Search Engine Land, Apr. 26, 2007, <http://searchengineland.com/what-is-google-pagerank-a-guide-for-searchers-webmasters-11068> (quoting Google Technology blog).

⁴⁶⁹ See *supra* note 116.

⁴⁷⁰ Microsoft IR (Jul. 23, 2012).

⁴⁷¹ Microsoft IR (Nov. 12, 2011).

⁴⁷² Mayer Tr. 83:6-84:1 (noting that Google experimented with third-party OneBoxes in 2005 and 2006, but abandoned the effort).

⁴⁷³ See Google Narrative Interrogatory Response at 41-43; Response of Google to DG Comp at 51-52.

⁴⁷⁴ See, e.g., **GOOG-Texas-0179659-63** (2007), at 59 (Launch Report for “Shopping Comparison Demotion” states, “The goal of this project is to reduce the dominant occurrence of comparison shopping sites in Google search results resulting in a more diverse result set.”); **GOOGLR-00111652** (2011), at 1 (Launch report for Repeat Click Demotion stating that the goal is to “demote poor quality hosts.”). There is evidence, however, that Google engineers are taught not to put in writing that changes are made for revenue considerations or to harm competition. See **GOOG-Texas-0214409-11** (2009), at 9 (stating that it was “unwise of the team to communicate that [revenue] was the reason for these changes.”).

⁴⁷⁵ See Brin Tr. 79:16-81:24 (acknowledging the similarities between Google Product Search and its competitors); Fox Tr. 204:6-204:20 (acknowledging the similarities between Google Product Search and its competitors).

⁴⁷⁶ Brin Tr. 78:7-9.

⁴⁷⁷ *Id.* at 78:7-20; see *id.* at 78:21-79:3 (indexing and serving up Google Product Search in Google’s regular web search results “would be a lousy experience” for users).

⁴⁷⁸ BCP specifically negotiated the production of any research studying user expectations concerning the basis upon which search results are determined, including Universal Search results. Based on BCP’s review of the more than 800 studies that Google produced and other responsive documents, there is no indication that Google has conducted any consumer research that bears on the issue, with most of Google’s research consisting of real-time experiments that are limited to observing users’ actual interaction with specific product refinements. Sergey Brin testified that he was not aware of any studies that targeted the particular question of how a user understands Google Universal Search results. Brin Tr. 140:18-25.

⁴⁷⁹ Sergey Brin testified that he does not recall if the decision to not expressly label the results as “Google” results was a conscious one, “but I imagine it would look stupid if the whole page just said Google, Google, Google, Google.” Brin Tr. 137:9-14. Q: “But you’re returning Google content there and expecting users to be able to distinguish; right?” A: “Yeah. I mean, it looks very different. I mean, the box is different. The link is different. I don’t think people are confused by that.” Brin Tr. 137:15-19.

⁴⁸⁰ *Id.* at 105:4-5.

⁴⁸¹ *Id.* at 110:2-5.

⁴⁸² See, e.g., *Kinderstart*, 2006 U.S. Dist. LEXIS 82481; *SearchKing*, 2003 U.S. Dist. LEXIS 27193.

⁴⁸³ Google’s possible “duty” to deal with certain competitors will be discussed at length at p. 94-95, *infra*, but it is worth noting here that courts have generally required some sort of affirmative contract or agreement in establishing an affirmative voluntary course of dealing. This makes sense because of the underlying nature of the cause of action: that the defendant has engaged in conduct that is clearly contrary to its own short-term benefit in order to achieve anticompetitive ends. An affirmative agreement provides clear evidence of the defendant’s prior intent to “deal” with that party based on, presumably, some real benefit to the defendant. On the search bias front, it would be more difficult to establish a “voluntary course of dealing.” Although Google does crawling and return search results for a variety of websites, and – in a sense – has certainly benefited from the websites’ efforts to “optimize” their content for inclusion in Google’s web search results, that does not translate into some prior course of dealing that it would defy common sense to abandon, but for an anticompetitive plan to rid itself of vertical rivals.

⁴⁸⁴ See *Tucker*, 493 F.Supp.2d at 1099 (suggesting that plaintiff’s product design claims would not be “construed as a refusal to deal”). But see *LiveUniverse*, 2007 U.S. Dist. Lexis 43739 (C.D. Cal. 2007) (no duty to deal with rival where defendant redesigned its platform so that links to rival’s website no longer functioned and where it blocked users from embedding links to rival’s website in their profiles), *aff’d*, 304 Fed. Appx. 554 (9th Cir. 2008) (unpublished op.). Alternatively, Section 5 may afford the Commission an avenue to challenge

design changes by monopolists that substantially disadvantage rivals or nascent threats, even where that conduct does not rise to a Section 2 violation. Professor Herbert Hovenkamp believes that the area of monopoly leveraging in industries characterized by network effects may be a type of exclusionary conduct uniquely suited to standalone Section 5 competition enforcement. Herbert J. Hovenkamp, *The Federal Trade Commission Act and the Sherman Act*, 62 Fla. L. Rev. 871, 885-87 (2010). Hovenkamp lauded the FTC's decision to challenge Intel's conduct with respect to graphic chips in the *Intel* matter because he felt that Section 5 was uniquely suited to deal with thorny issues relating to design changes by monopolists that disadvantage rivals, *id.*, and because liability under Section 5 does not lead to the imposition of treble damages, and is applied by an agency that is able to develop expertise about particularly complex issues such as design changes that negatively impact rivals. See also Areeda & Hovenkamp, *Antitrust Law*, ¶ 772h ("Another possibility is use of § 5 of the Federal Trade Commission Act, whose prohibition of unfair methods competition can reach instances of leveraging activity relating monopolized and nonmonopolized markets in circumstances where § 2 of the Sherman Act cannot.").

⁴⁸⁵ See generally Eugene Volkh and Donald M. Falk, Mayer Brown LLP, "First Amendment Protection for Search Engine Search Results" (Apr. 20, 2012).

⁴⁸⁶ 2003 U.S. Dist. LEXIS 27193 (W.D. Okla. 2003).

⁴⁸⁷ *Id.* at *3.

⁴⁸⁸ See *Kinderstart LLC v. Google, Inc.*, 2006 U.S. Dist. LEXIS 82481, at *30 n.6 (N.D. Cal. Jul. 13, 2006) (although not specifically reaching the issue, noting that Google's manipulation of its search results might be distinguishable from other forms of protected expression because Google is not a media defendant, and website ranking may be of little or no public concern, citing *Jefferson County School Dist. No. R-1 v. Moody's Investor's Services, Inc.*, 175 F.3d 848, 852 (10th Cir. 1999)).

⁴⁸⁹ See *Central Hudson Gas & Elec. Corp. v. Public Serv. Comm'n*, 447 U.S. 557, 667 (1980).

⁴⁹⁰ *Edenfield v. Fane*, 507 U.S. 761, 767 (1993) (quoting *Ohralik v. Ohio State Bar Assn.*, 436 U.S. 447, 457 (1978)).

⁴⁹¹ 540 U.S. 398 (2004).

⁴⁹² *Id.* at 408 (quoting *United States v. Colgate & Co.*, 250 U.S. 300, 307 (1919)); see *Pac. Bell Tel. Co. v. Linkline Communications, Inc.*, 129 S.Ct. 1109, 1118 (2009) ("As a general rule, businesses are free to choose the parties with whom they will deal, as well as the prices, terms, and conditions of that dealing").

⁴⁹³ *Id.* at 408; see *Linkline*, 129 S.Ct. at 1118 (acknowledging "limited circumstances in which a firm's unilateral refusal to deal with its rivals can give rise to antitrust liability").

⁴⁹⁴ 472 U.S. 585 (1985).

⁴⁹⁵ *Trinko*, 540 U.S. at 409.

⁴⁹⁶ *Trinko*, 540 U.S. at 408-09 (describing *Aspen Skiing*).

⁴⁹⁷ *Id.* at 409 (emphasis in original).

⁴⁹⁸ 93 Fed. Appx. 1 (5th Cir. 2004) (unpublished op.).

⁴⁹⁹ *Id.* at 3.

⁵⁰⁰ *Id.* at 4.

⁵⁰¹ *Id.* at 9-10. See also, e.g., *Creative Copier Servs. v. Xerox Corp.*, 344 F.Supp.2d 858, 866 (D. Conn. 2004) (allowing plaintiff's refusal to deal claims to go forward where plaintiff alleged that defendant Xerox engaged in a voluntary course of dealing with plaintiff, then unilaterally "stopped dealing with [plaintiff] or made it difficult for [plaintiff] to deal with Xerox" without a legitimate business justification). Conversely, several courts have dismissed complaints that have failed to properly allege a "unilateral termination of a voluntary course of dealing." See, e.g., *Covad Communications Co. v. Bell Atlantic Corp.*, 398 F.3d 666, 673 (D.C. Cir. 2005) (upholding dismissal of complaint where, among other things, plaintiff failed to allege that "the defendant had previously engaged in a course of dealing with its rivals, or that it would ever have done so absent statutory compulsion" (internal quotation omitted)); *LiveUniverse, Inc. v. MySpace, Inc.*, 304 Fed. Appx. 554, 556 (9th Cir. 1009) (unpublished op.) (holding that a refusal to deal claim requires a prior affirmative decision or agreement to cooperate, and upholding dismissal of complaint where voluntary, affirmative prior course of dealing was not alleged); *In re Elevator Antitrust Litig.*, 503 F.3d 47, 52-53 (2d Cir. 2007) (interpreting the "sole exception" to a defendant's right to refuse to deal as "when a monopolist seeks to terminate a prior (voluntary) course of dealing with a competitor," and dismissing complaint where plaintiff failed to allege this). See also Areeda & Hovenkamp ¶772h ("As a general matter, court-imposed sharing obligations created under the very general provisions of the antitrust laws must be restricted to circumstances where the defendant

terminated an existing joint venture without justification. We would not interpret it to give the plaintiff a right to create a new venture where none had existed before”).

⁵⁰² See *Trinko*, 540 U.S. at 409.

⁵⁰³ See *Aspen*, 472 U.S. at 610-11 (the evidence showed that defendant “was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival.”)

⁵⁰⁴ In Sep. 2007 and Jul. 2011, Microsoft notified Yelp that it planned to change the way Microsoft incorporated Yelp’s content into MSN or Bing’s local product, and Yelp saw MSN/Bing’s local product becoming more like a local information destination page. Regarding Yelp’s 2007 negotiation with Microsoft, see, e.g., **FTC-YELPTX-00000155-60** (2007) (Geoff Donaker of Yelp to Microsoft, “Just to make sure our messaging is clear and consistent, I feel compelled to note that Yelp’s Terms of Service expressly prohibit any scraping or display of our content without permission. . . .” John Skovron of Microsoft responded, “. . . if you really think that we’re not going to benefit your business in how we’re able to expose content sourced from your site we’ll either make changes or remove it.”). Regarding Yelp’s 2012 negotiation with Microsoft, see, e.g., **FTC-YELPTX-00000230** (2011) (Jeremy Stoppelman to Microsoft, “To be clear, if Bing uses our content in a similar way [as Google Places], we will remove Yelp content from Bing entirely. Bing/Yahoo represents a single digit percentage of traffic to Yelp, so while it would be a minor shame to lose the traffic, we’re planning on blocking Bing should this change roll”).

⁵⁰⁵ Yelp IR (Jul. 22, 2011; Aug. 1, 2011), at 3; Yelp IR (Mar. 5, 2012).

⁵⁰⁶ Yelp IR (Jul. 22, 2011; Aug. 1, 2011); Yelp IR (Mar. 5, 2012).

⁵⁰⁷ Areeda & Hovenkamp, ¶ 772h.

⁵⁰⁸ Some courts have interpreted *Trinko* as requiring a plaintiff to demonstrate that the defendant has sacrificed short-term profits in refusing to deal with the plaintiff. See, e.g., *Covad*, 398 F.3d at 675 (stating that, in order to prevail on refusal to deal claim, plaintiff would have to allege that the refusal to deal resulted in some kind of “short-term economic loss” to the defendant); *MetroNet*, 383 F.3d at 1132-33 (observing that defendant’s actions did not have the same economic significance as the *Aspen Skiing* defendant’s refusal to sell to plaintiff at retail price because the defendant’s conduct did not entail a sacrifice of short-term profits); *Four Corners Nephrology Assoc. v. Mercy Medical Center of Durango*, 582 F.3d 1216, 1225 (10th Cir. 2009) (observing that “the key factor permitting liability in *Aspen Skiing* was that the defendant terminated a profitable relationship without any economic justification,” and noting that, in the present case, the evidence suggested that the defendant refused to deal with the plaintiff to avoid an “unprofitable relationship” and to “maximize its chances of profitability in the short-term”). However, this interpretation appears inconsistent with the Supreme Court’s actual position in *Aspen Skiing*, as well as the Court’s interpretation of *Aspen Skiing* in the more recent *Trinko* decision. See *Aspen Skiing*, 472 U.S. at 608 (observing only that, because the defendant declined to sell tickets at retail price, “[t]he jury may well have concluded that Ski Co. elected to forgo . . . short-run benefits because it was more interested in reducing competition,” and that Ski Co.’s willingness “to sacrifice short-run benefits and consumer goodwill” supported the “inference that Ski Co. was not motivated by efficiency concerns,” but rather by a desire to harm its smaller rival); *Trinko*, 540 U.S. at 409 (assuming that the *Aspen Skiing* defendant’s termination of “a voluntary (and thus presumably profitable) course of dealing . . . suggested a willingness to forsake short-term profits to achieve an anticompetitive end”) (emphasis in original). See also Areeda & Hovenkamp ¶ 772c1 (expressing doubt that the *Aspen Skiing* defendant’s refusal to sell tickets at retail price to defendant resulted in short-term revenue losses to defendant). As the District of Connecticut has observed, *Trinko* did not establish a “new rule in refusal to deal cases, namely that a complaint is deficient unless the plaintiff has specifically alleged that the defendant could not possibly make a short-term profit from the challenged conduct. The *Trinko* court held that a motion to dismiss was appropriate when it was abundantly clear that unbundling – the alternative to the alleged anticompetitive conduct – was manifestly inefficient. It distinguished that situation from *Aspen Skiing* where a jury was permitted to infer anticompetitive conduct from a lack of short-term profits. But nowhere in *Trinko* did the Court indicate that a complaint should be dismissed if it fails to recite the magic words ‘no short-term profit.’” *Creative Copier Servs.*, 344 F.Supp.2d at 866 (emphasis in original).

⁵⁰⁹ See, e.g., *Michigan State Medical Society*, 110 F.T.C. 191 (1983) (in horizontal boycott context, threat alone is actionable since it is designed to produce the anticompetitive effect). Courts have routinely found that non-explicit refusals to deal, or offers to deal only on egregiously unreasonable terms, can constitute unlawful refusals to deal. See, e.g., *MetroNet Servs. Corp. v. Qwest Corp.*, 383 F.3d 1124, 1132 (9th Cir. 2004) (“An

offer to deal with a competitor on unreasonable terms and conditions can amount to a practical refusal to deal”); *Aspen Skiing*, 472 U.S. at 592-93 (noting that defendant offered plaintiff joint ticket deal provided that plaintiff agreed to accept a fixed percentage of profits considerably below plaintiff’s historical average, that a member of defendant’s board of directors admitted that defendant made an offer it knew plaintiff would not accept, and that on those facts, plaintiff did reject defendant’s offer); *Duke Energy*, 93 Fed. Appx. at 4 (premising liability for refusal to deal on offer with terms that defendant “knew were unrealistic or completely unviable” to plaintiff); *Creative Copier Servs.*, 344 F.Supp.2d at 866 (allowing refusal to deal claim to proceed based on defendant’s delays in shipping, making certain parts unavailable, and raising prices on other parts). *See also* Areeda & Hovenkamp ¶772c1 (noting that, in *Aspen Skiing*, defendant did not actually refuse to deal with plaintiff, but kept trying to reduce plaintiff’s share of the profits until it “finally made an offer that [plaintiff] would and did find unacceptable”).

⁵¹⁰ *Cf. In the Matter of Intel Corp.*, 128 FTC Decisions 213 (1999) (challenging Intel’s threat to cut off customers from critical technical information unless those customers granted Intel licenses to technology developed and owned by the customers).

⁵¹¹ *See, e.g., In the Matter of Negotiated Data Solutions LLC*, FTC File No. 051-0094 (2008) (condemning, as unfair method of competition under Section 5, N-Data’s reneging on prior patent owner’s pricing commitments to standard-setting organization, where (i) the conduct caused “substantial consumer injury” that (ii) was “not . . . outweighed by any countervailing benefits to consumers or competition that the practice produces,” and (iii) it was an injury that “consumers themselves could not reasonably have avoided”) (quoting *Orkin Exterminating Co. v. FTC*, 849 F.2d 1354, 1364 (11th Cir. 1988)).

⁵¹² *See* Analysis of Proposed Consent Order to Aid Public Comment, *In the Matter of Intel Corp.*, 128 FTC Decisions 213 (1999), at *3 (“Unjustified conduct by a monopolist that removes the incentive to . . . compet[e] by depriving innovators of their reward or otherwise tilting the playing field against new entrants or fringe competitors . . . has a direct and substantial impact upon future consumers”).

⁵¹³ *See, e.g., Microsoft IR* (Jul. 23, 2012) (Qi Lu referencing well-known Silicon Valley investor who has allegedly pulled funding from a variety of vertical websites).

⁵¹⁴ Mayer Tr. 152:19-24 (“ . . . it’s not possible to be dropped in one place and not the other”).

⁵¹⁵ *See supra* p. 37. Similarly, Google’s almost immediate removal of Amazon product reviews from Google Product Search indicates that technical barriers were quickly surmounted when Google desired to accommodate a partner.

⁵¹⁶ Google allows newspapers to choose to be indexed for Google’s web search results, but not by Google News. *See* Jonathan Simon, *New User Agent for News*, Google Webmaster Central, Dec. 2, 2009, <http://googlewebmastercentral.blogspot.com/2009/12/new-user-agent-for-news.html>; David Smydra, *Google News Now Crawling with Googlebot*, Google Webmaster Central, Aug. 25, 2011, <http://googlewebmastercentral.blogspot.com/2011/08/google-news-now-crawling-with-googlebot.html>; Vanessa Fox, *Google Retires the Googlebot-News Bot*, Search Engine Land, <http://searchengineland.com/google-retires-the-googlebot-news-bot-90607>. The primary difference between Google News and the affected verticals here is that Google makes little money from Google News as a stand-alone product. Presumably, this lower-value vertical is one in which Google was willing to make certain concessions that it was not willing to make in higher-value vertical areas.

⁵¹⁷ As demonstrated in the *Microsoft* opinion, courts are deferential in their treatment of product innovations with genuine procompetitive qualities. *See Microsoft*, 253 F.3d at 75-76 (reversing finding of liability with respect to Microsoft development of a java script that allowed improved performance, but was incompatible with the java script pioneered by Sun Microsystems, Inc.); *see also Allied Orthopedic*, 592 F.3d at 998-1002 (finding that the introduction of improved sensors that were incompatible with competitors’ monitoring systems was not anticompetitive). However, when evaluating contractual restrictions attached to the product, the *Microsoft* court had no trouble evaluating those contractual restrictions separately from the products they were attached to. *See Microsoft*, 253 F.3d at 59-63 (condemning licensing restrictions for harming rivals, “not by improving its own product, but, rather, by preventing OEMs from taking actions that could increase rivals’ share of usage”). This distinction demonstrates why the consumer choice model described in the BE Staff Memo of Jan. 31, 2012, at 23-24, frames a false choice. With the model, BE Staff compared overall welfare of advertisers with the API plus restrictions versus their welfare if no API existed. There is no support in the case law for limiting the choice in such a way when there is a third choice: the API without the restrictive conditions. The analogous argument in the *Microsoft* case would have prevented the courts from considering the possibility

of a Windows operating system that did not come burdened with contractual and technical restrictions preventing OEMs from featuring other browsers.

⁵¹⁸ While Google itself has not argued that such a remedy would be imposing a duty to deal, the argument has been raised internally. Review of the leading cases, including *Trinko*, *LinkLine* and *Aspen Skiing*, makes clear that the duty to deal doctrine is only relevant to claims that antitrust law should compel a firm to deal directly with a *competitor*. In the present case, the issue is the terms and conditions upon which Google deals with its *customers*. As such, they are subject to the same kind of review as any section 2 case, like exclusive dealing, predatory pricing or tying.

⁵¹⁹ As an example, Google forced Marin Software to remove a feature it called “The Cloner.” Marin had promoted the feature as “an easy-to-use, professional tool that removes the cross-platform management impediment, making it easy for marketers to derive maximum effectiveness, reach, and conversion from their search campaigns, without requiring costly new resources.” Press Release, Marin Software, Marin Software Unveils ‘The Cloner’ (Nov. 4, 2008) <http://www.prweb.com/releases/2008/11/prweb1567824.htm>.

⁵²⁰ See *supra* text accompanying footnote 277.

⁵²¹ The possibility that the API itself reduces transaction costs is not a relevant consideration when the restrictive conditions are not necessary to the functioning of the API.

⁵²² For example, Google offers a service to advertisers called Expanded and Broad Match as a way to encourage increased spend on AdWords by decreasing transaction costs. This opt-in service gives advertisers the option to let Google automatically expand their keyword lists to include many words and phrases that Google’s algorithms determine ought to have similar relevance. Hal Varian described this as a “very valuable service to advertisers;” it increases their advertising opportunities without having “to consider every possible variation of queries.” Varian Tr. 218:11 – 221:8.

⁵²³ Richard Holden and Hal Varian endorsed this view. **CX-41 (GOOGFOX-000128077-080)** (2009), at 3 (Advertisers “focus on us first today b/c of volume of search and if they don’t get around to the other networks b/c it is a hassle today, the other networks lose out.”) See also Brin Tr. 204:2-17 (testifying that Google has had more difficulty gaining “traction” with the local advertiser base because small advertisers have far less time and resources to advertise).

⁵²⁴ See *supra* note 262. [multi-homing data].

⁵²⁵ Microsoft also claims that multi-homing advertisers optimize their campaigns more frequently on AdWords than on AdCenter. See *supra* p. 46-48 and note 266.

⁵²⁶ See Michael L. Katz et al., “An Economic Analysis of Microsoft’s Allegations That Google’s Conduct Harms Competition by Reducing Bing’s Scale,” at 69 (May 14, 2012) (reporting on internal study showing that 81 percent of paid clicks on Google’s AdWords platform over 18 days, from Mar. to Apr. 2011, were for U.S. advertisers that also advertised on Bing/Yahoo!).

⁵²⁷ See Microsoft IR (Jul. 23, 2012).

⁵²⁸ Schmidt Tr. 121:4. See *id.* at 120:20-121:6 (testifying that being able to “fully fill out all the subparts” of a query for flowers is important to being able to “fully monetize[]” the ad); *id.* at 119:3-5 (“there’s some benefit to having a large long tail and more advertisers there”). See also Brin Tr. 203:15-22 (“I think the interesting thing about local advertisers is that it would hit somewhere where you could . . . improve the user experience quite a bit . . . because [the smaller, local advertisers tend to be] . . . really thoughtful about what they want to advertise, what data they want to have available. I think that would improve our experience. . .”).

⁵²⁹ See *supra* p. 15 & note 66.

⁵³⁰ See *supra* p. 76 (describing the benefits of scale in advertising and the “virtuous circle”).

⁵³¹ Holden Tr. 76:2-19 (Q: Do either prohibitions serve to improve the actual functioning of the API in any way? A: The actual – the functioning meaning how effective the API is for the search engine marketer? Q: Yes. A: No, I don’t think so.)

⁵³² Google Submission to the EC, “Google’s AdWords API Terms and Conditions Do Not Have Anti-Competitive Foreclosure Effects – An Analytic Framework” (Sep. 23, 2011), at 41.

⁵³³ *Id.*

⁵³⁴ Holden Tr. 28:20-29:8.

⁵³⁵ *Id.* at 23:25-24:15 (Q: Was there any other purpose for the commingling prohibition? A: That’s really the primary driver behind it).

⁵³⁶ See, e.g., Acquisio IR (Sep. 12, 2011) (explaining that Acquisio’s software is designed to help clients maximize their ROI); Booyah IR (Jan. 25, 2012) (“By cut[ting] corners [Booyah] will not be able to return the

correct ROI to their client and would thus be out-of-business.”); Clickable IR (Oct. 24, 2011) (“Although advertising across multiple platforms requires Clickable to use additional resources, Clickable wants to encourage this behavior nonetheless . . . [as] advertising across multiple platforms helps its clients achieve the highest return on investment (ROI).”) Didit.com (Dec. 27, 2011) (“Didit manages client campaigns to maximize ROI.”); Interpublic IR (Oct. 20, 2011) (noting that “the search advertising market is ‘effectiveness driven,’”); Kenshoo IR (Nov. 9, 2011) (“Kenshoo’s software is structured to primarily emphasize return on investment (ROI) and scale, and to secondarily address brand awareness and exposure.”); Raven Tools IR (Feb. 28, 2012) (“Raven is limited on what they can do, so they focus their energy on where they see the most return.”) Reach Local IR (Jan. 12, 2012) (“[t]he value in Reach Local’s advertising campaigns stems from the return on investment, time and opportunity cost savings, access to technology and software, and the knowledge of its staff.”).

⁵³⁷ Holden Tr. 64:20-65:9. A search for SEMs reveals hundreds of firms offering these services; *see also*, Varian Tr. 107:4-108:4 (explaining that ad agencies act in a non-zero sum game and their role is a positive one for Google); Varian Tr. 149:22-150:11 (where there are numerous advertising agencies “they would try to compete in providing functionality and, of course, costs of developing tools that are appropriate to the needs of their clients . . . like any competitive market, they would try to address the needs of their potential customers.”).

⁵³⁸ **CX-37 (GOOGWOJC-000031755-64)** (2008), at 58 (“Market forces are going to protect Google. Their (3rd party, agencies) customers will drop that customer/agency. To the extent that someone is adding spammy stuff – they are going to worsen their own performance and this won’t work out in the long run.”), at 59 (“Won’t market forces drive developers to adopt [all AdWords functionality]? Customers will hound you or leave if you don’t offer it”).

⁵³⁹ To the extent SEMs and agencies have misaligned incentives, it would be with non-dominant search networks, because the third parties’ first priority would be to improve their clients’ returns on AdWords, the largest search network, before optimizing on others. *See, e.g.*, Varian Tr. 135:11-17.

⁵⁴⁰ **GOOGAROR-000018605-16** (2006), at 11 (emphasis added).

⁵⁴¹ Holden Tr. 31:19-32:16 (Google does not have reliable information about the ROI of advertisers using agencies and SEMs); *id.* at 129:10-130:14 (no record of any harm to Google from SEMs that were violating terms and conditions).

⁵⁴² Holden Tr. 31:22-32:7 (“typically our assessments come back that rate of spend increases on advertisers working through agencies.”). *See also* **CX-41 (GOOGFOX-000128077-80)** (2009), at 77 (Google study finding that advertisers who use SEM tools have about 13% higher spend *growth* than advertisers who only use the AdWords Front End).

⁵⁴³ Holden Tr. 128:7-130:14; *cf.* Google Submission to the EC, “Google’s AdWords API Terms and Conditions Do Not Have Anti-Competitive Foreclosure Effects – An Analytic Framework” (Sep. 23, 2011), at 19 (“Google’s online AdWords guide explains: “*getting the most out of AdWords requires ongoing experimentation.*”) (emphasis in the original).

⁵⁴⁴ AdWords Terms and Conditions, III.2.f. provides: “All AdWords API Clients must expose at least as much functionality as is set forth in the RMF List. If the RMF List includes a particular function, all aspects of that function and all API calls related to that function must be enabled and exposed. AdWords API Clients will need to expose any additional functionality added to the RMF List within 4 months after those functionalities are added to the RMF List.” The list of requirements is updated periodically and posted by Google. *See* Google Developers, Required Minimum Functionality, <https://developers.google.com/adwords/api/docs/requirements> (last visited Jul. 25, 2012).

⁵⁴⁵ **CX-192 (GOOGVARI-000006959R-61R)** (2004), at 61R. Later in that thread, Hal Varian is noted as saying, “We’re the dominant incumbent in this industry; the folks pushing us to develop our API will be the underdogs trying to unseat us.” *Id.* at 60R.

⁵⁴⁶ **GOOGKAMA-000004812-13** (2004), at 12; *see also* **GOOGKAMA-000015528** (2006), at 2 (in response to concern about Google advertisers migrating to MSN AdCenter, Google’s response is “fight commoditization of search networks by enforcing AdWords API T&Cs with SEMs”).

⁵⁴⁷ **GOOGKAMA-000004815** (2004), at 1.

⁵⁴⁸ *Id.*

⁵⁴⁹ AdWords API Terms and Conditions, section III.2.f (“All AdWords API Clients must expose at least as much functionality as is set forth in the Required Minimum Functionality List.”).

⁵⁵⁰ Google Submission to the EC, “Google’s AdWords API Terms and Conditions Do Not Have Anti-Competitive Foreclosure Effects – An Analytic Framework” (Sep. 23, 2011), at 44, 50.

⁵⁵¹ The after-the-fact shift in justification appears to have occurred sometime in 2008, when Harvard professor (and Microsoft ally) Benjamin Edelman began publicly criticizing Google’s terms and conditions. See [Benedelman.org](http://www.benedelman.org), PPC Platform Competition and Google’s “May Not Copy” Restriction, <http://www.benedelman.org/news/062708-1.html> (last visited Jul. 25, 2012). From that point on, the documents discussing the API were heavily redacted. Indeed, Hal Varian’s investigational hearing was postponed twice while Staff and Google engaged in a lengthy privilege dispute over many of these documents. Some of the previously withheld documents have since been produced, but not many.

⁵⁵² See *Microsoft*, 253 F.3d at 62 (“Microsoft reduced rivals browsers usage share not by improving its own product but, rather, by preventing OEMs from taking actions that could increase rivals’ share of usage”).

⁵⁵³ See *Microsoft*, 253 F.3d at 58-62. See also e.g., *United States v. Dentsply*, 399 F.3d 181, 188-95 (3d Cir. 2005) (holding that dominant U.S. manufacturer of artificial teeth was liable under Section 2 for using exclusive agreements to prevent competitors from accessing “key” distribution channels that were critical in reaching consumers).

⁵⁵⁴ See *id.* at 326 (“Even though a contract does ‘not contain specific agreements not to use the [goods] of a competitor,’ if ‘the practical effect . . . is to prevent such use,’ it comes within the condition of the section as to exclusivity”) (quoting *United Shoe Machinery Corp. v. United States*, 258 U.S. 451, 457 (1922)). See also e.g., *Lepage’s Inc. v. 3M*, 324 F.3d 141, 158-59 (3d Cir. 2003) (relying on *Microsoft* in holding that non-exclusive discount and rebate agreements between the defendant manufacturer and key retailers had the effect of excluding rivals in violation of Section 2 of the Sherman Act).

⁵⁵⁵ *Microsoft*, 253 F.3d at 69.

⁵⁵⁶ Other relevant factors include how easily the agreement can be terminated, the level of the distribution chain where the restraint is imposed, and whether there are alternative channels for competitors to reach the market. *Roland Machine Co. v. Dresser Indus.*, 749 F.2d 380, 395 (7th Cir. 1984) (agreements less than one year with easy termination clauses are presumed to be lawful); *Seagood Trading Corp. v. Jerrico, Inc.*, 924 F.2d 1555, 1572-73 (11th Cir. 1991).

⁵⁵⁷ *Microsoft*, 253 F.3d at 34; compare *Microsoft*, 253 F.3d at 70 (“[A] monopolist’s use of exclusive contracts, in certain circumstances, may give rise to a § 2 violation even though the contracts foreclose less than the roughly 40% or 50% share usually required in order to establish a § 1 violation”), with *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30, 52 (D.D.C. 2000) (“Where courts have found that the agreements in question failed to foreclose absolutely outlets that together accounted for a substantial percentage of the total distribution of the relevant products, they have consistently declined to assign liability”), and *Omega Environmental, Inc. v. Gilbarco, Inc.*, 127 F.3d 1157 (9th Cir. 1997) (“If competitors can reach the ultimate consumers of the product by employing existing or potential alternative channels of distribution, it is unclear whether such restrictions foreclose from competition any part of the relevant market.”).

⁵⁵⁸ *Omega Environmental, Inc. v. Gilbarco Inc.*, 127 F.3d 1157, 1162 (9th Cir. 1997).

⁵⁵⁹ See *Stitt Spark Plug Co. v. Champion Spark Plug Co.*, 840 F.2d 1253, 1258 (5th Cir. 1988) (foreclosure referred to as “comparison between the number of distribution outlets available and the number of those foreclosed”).

⁵⁶⁰ See *Microsoft Corp.*, 253 F.3d at 70 (finding that Microsoft foreclosed a substantial percentage of the available opportunities for browser distribution without calculating a specific foreclosure rate); but see *Masimo Corp. v. Tyco Health Care Group, L.P.*, 350 Fed. Appx. 95, 97 (9th Cir. 2009) (“[The] effects of Tyco’s varied bundling arrangements was insufficient to support a finding that the arrangements foreclosed competition in a substantial share of the relevant market”).

⁵⁶¹ There are noted problems with the comScore dataset, most importantly, perhaps, that it appears to significantly underestimate Google’s syndicated query volume (for 2011, 32.9 billion in comScore v. 132 billion, as submitted by Google). However, given the limitations of all existing datasets in this area, Staff relies on the comScore dataset as the best proxy for the parties’ respective performances in the market.

⁵⁶² See *supra* note 439.

⁵⁶³ Moreover, relying on third-party data submissions opens up a host of other issues, most problematically the question of how each party calculates its own syndication query volume and whether they are calculating the volumes in the same manner. Nevertheless, in an abundance of caution, we have calculated an alternative set of foreclosure numbers based on internal company datasets. See Appendix 3.

⁵⁶⁴ The “conservative” estimate includes in the “foreclosed” group *only* the companies that have explicitly complained to the Commission that agreements foreclose them from using a rival syndication service, and that they would like to do so, but for their current agreement with Google. This group includes only eBay. It should also include NexTag and Business.com, however the comScore dataset does not provide numbers for these firms. The comScore dataset suggests that, under this scenario, 8,653,366,936 queries, or some 19.6 percent of the market, is foreclosed. (If IAC is included within this group, the foreclosed query volume increases to 16,447,977,342, or some 37.3 percent of the market.) This is an extremely conservative estimate because, as noted above, courts routinely include all sales made pursuant to an exclusive agreement as being foreclosed.

⁵⁶⁵ The “aggressive” estimate includes in the “foreclosed” group every company that is party to an exclusive agreement with Google (*see* Appendix 1, table showing exclusive agreements), as well as every company that is party to an agreement with the challenged “preferred placement” provision (*see* Appendix 2, table showing “preferred placement” agreements), *except* for any party that has explicitly told us that they do not view the “preferred placement” provision as a barrier to the use of a rival’s syndication service. The excluded group includes Amazon, Wal-Mart, and Google’s online partners. Also excluded is Earthlink, although the comScore dataset does not provide numbers for this firm. The comScore dataset suggests that, under this scenario, 29,133,927,882 queries, or some 66.1 percent of the market is foreclosed.

⁵⁶⁶ The “intermediate” estimate includes in the “foreclosed” group every company that is party to an exclusive agreement with Google, as well as any company that is party to “preferred placement” terms and has explicitly complained to the Commission that these terms foreclose them from using a rival syndication service, and has stated that they would like to do so, but for their current agreement with Google. In addition to all partners with an exclusive agreement (*see* Appendix 1, table showing exclusive agreements), this group includes: eBay (and should include NexTag and Business.com, but does not, given the limitations of the comScore dataset, described above). The comScore dataset suggests that, under this scenario, 22,804,213,204 queries, or some 51.5 percent of the market, is foreclosed. We believe that this is the most defensible position because it takes into account both the exclusive agreements – those companies literally foreclosed to competitors on the face of their agreements – as well as any “preferred placement” agreements for companies that have explicitly complained about the *de facto* exclusive effect of such agreements. Staff believes that this approach is consistent with case law. *See Omega Environmental, Inc.* 127 F.3d at 1162; *Stitt Spark Plug Co.*, 840 F.2d at 1258.

⁵⁶⁷ 2011 comScore qSearch20 Report.

⁵⁶⁸ *Microsoft*, 253 F.3d at 64; *see also* Robert H. Bork, *The Antitrust Paradox* 158 (1978) (“But there is no doubt that predation can succeed when the distribution pattern is so much more efficient than the alternative that those forced out of the pattern cannot compete”).

⁵⁶⁹ *Ryko Mfg. Co. v. Eden Servs.*, 823 F.2d 1215, 1233 (8th Cir. 1987) (“When the degree of foreclosure caused by the exclusivity provisions is so great that it invariably indicates that the supplier imposing the provisions has market power, we may rely on the foreclosure rate alone to establish the violation.”).

⁵⁷⁰ *See Tampa Electric Co. v. Nashville Coal Co.*, 365 U.S. 320, 329 (1961); *In re Beltone Electronics Corp.*, 100 FTC 68, 204 (1982).

⁵⁷¹ *See* Microsoft IR (Jul. 20, 2012); Microsoft IR (Qi Liu, Jul. 23, 2012) (reporting that Microsoft’s people search program is better than Google’s because Bing has access to Facebook data and that Bing built a better search system for travel queries than Google has.)

⁵⁷² IAC IR (Dec. 8, 2011).

⁵⁷³ *Id.* Indeed, as CityGrid explained, there are approximately 15-17 million individual local businesses that hope to attract local customers throughout the United States. These local businesses are potential advertisers for which search advertising (particularly search advertising serving specialized or “tail” queries) can deliver a very high return for investment. As such, these markets are highly lucrative for Google, and competition for this advertising revenue from specialized web-sites, such as CityGrid and UrbanSpoon, aggregately poses a significant competitive threat to Google. For reference, competition in serving these local and specialized (vertical) markets is the same competitive threat Google contemplated in its 2007 EU planning document entitled, “Online Advertising Challenges: Rise of the Aggregators,” wherein Google saw local advertising markets in Europe as having many companies experimenting to lure advertisers it what Google only saw as a “winner take all” market. *See CX-116 (GOOG-Texas-1486915-70)* (2009), at 21.

⁵⁷⁴ IAC IR (Dec. 8, 2011).

⁵⁷⁵ *Id.*

⁵⁷⁶ See Microsoft EC Complaint at 28-45.

⁵⁷⁷ Microsoft IR (Jun. 11, 2012) (explaining that more high traffic partners, like those under agreement with Google, will help Bing move up the scale curve).

⁵⁷⁸ Indeed, Google does not rely on any of its syndication data to improve its search algorithms. See Google Submission, “An Economic Analysis of Microsoft’s Allegations that Google’s Conduct Harms Competition by Reducing Bing’s Scale” (May 14, 2012), at 12. However, Microsoft has specifically stated that it does rely on the search query volume from Yahoo!, and would similarly rely on the search query volume from some of Google’s largest partners, like AOL and IAC. See Susan Athey, Scale in Online Search (Mar. 10, 2012), at 18 (explaining that search queries on search engine syndication partners, such as Yahoo!, are “high quality for Bing because they reflect a broad spectrum of head and tail queries,” but queries conducted on “non-search engine syndication partners do not provide the same level of information about user intent that Bing gets from a search engine partner”). The fact that Google does not use – and has never used – syndication data is irrelevant to Microsoft’s ability to do so. Moreover, Google’s argument misses a critical point. At the very least, additional syndication partners would net Bing additional search advertising volume (and ad clicks), and this is a crucial element of developing Microsoft’s ad platform and improving its monetization rate. See *supra* p. 15-16 and 77-78.

⁵⁷⁹ See *supra* p. 17; Microsoft IR (Jun. 11, 2012). Contrast this with Sergey Brin’s testimony that Google’s quality difference would be “pretty marginal” with 20 percent fewer queries today. Brin Tr. 153:1-6. See also Preston McAfee, Yahoo!, Presentation, “Scale, Data, and Machine Learning: Solving the Search Problem” (Sep. 14, 2011), at 8 (theorizing that, “[o]f all search engines, only Google may be experiencing declining returns to scale”).

⁵⁸⁰ **GOOG-Texas-0437725** (2009), at 4.

⁵⁸¹ **GOOG-ITA-01-0357205-06** (Aug. 2010), at 5. See also **GOOGKAPO-000006352-53** (Feb. 17, 2010) (considering “what is the strategic/defensive value [of the 2010 AOL renewal] (preventing it from going to Microsoft/Yahoo?”).

⁵⁸² **GOOG-ITA-16-0030892-93** (undated, c. 2009), at 92 (document entitled “AOL/Google Partnership “Good to Know”). AOL’s limited value to Google was discussed on a number of occasions. For example, in Aug. 2009, senior vice president and chief business officer Nikesh Arora noted that Google’s current deal with AOL “loses money on a gross basis,” and that, because of this, AOL was becoming “more nervous” about what Google’s proposal for a renewed syndication deal was going to look like. It appears that Google initially intended to offer AOL significantly worse renewal terms, including a decreased revenue share (80.75 percent for the new deal versus 88 percent in 2005), see **GOOG-Texas-0437725-33** (2009), at 29, than it ultimately provided AOL. See AOL IR (Dec. 7, 2011) (noting that AOL’s 2010 agreement with Google provided for a 90 percent revenue share minus a 2 percent deduction for click spam). See also **GOOG-AFS-000000146** (2010), 158-161 (2010 agreement between AOL and Google, detailing more than \$60 million per year of advance payments, and revenue shares of 85 percent, which contained a most favored nations clause (MFN) that guaranteed AOL a matching rate if Google agreed to pay another publisher more than 85 percent). Staff took investigational hearing testimony from Sanjay Kapoor, who negotiated the 2010 Google/AOL agreement on behalf of Google. In attempting to explain these documents, Mr. Kapoor testified that while revenues from the AOL relationship may have declined, AOL had a very strong brand, and retaining that brand relationship was valuable to Google. Kapoor Tr. 32:9-33:2; *id.* at 50:7-10; *id.* at 90:24-91:10; *id.* at 108:18-23; *id.* at 135:24-136:24; *id.* at 140:7-141:18; Brin Tr. 235:7-12; 239:22-240:3.

⁵⁸³ See *supra* p. 55-56 & notes 305 and 306.

⁵⁸⁴ Amazon IR (Feb. 15, 2012) (Amazon earned \$175 million in total search syndication revenue world-wide, with \$169 million from Google and the rest from Yahoo/Bing). No domestic number was available, but the domestic share is likely modestly higher just because Google has a much more dominant position in overseas markets than it does in the United States.

⁵⁸⁵ IAC IR (Dec. 8, 2011) (Microsoft sought an exclusive deal); Amazon IR (Feb. 15, 2012) (Microsoft and Yahoo! both require page-based exclusivity so their ads cannot be mixed and matched on the same page with another provider’s ads).

⁵⁸⁶ See *supra* p. 56 & note 309 and 310. Microsoft admits that, because Microsoft’s product monetizes at such a low rate relative to Google, winning new syndication deals has not been a strategic priority for the company. Bing needs a larger portfolio of advertisers in order to present a competitive offering to publishers, and so,

outside of major syndication platforms (*i.e.*, those with significant query volume, such as AOL and IAC), the company has not been focused on winning new search syndication business. Microsoft IR (Jun. 11, 2012).

⁵⁸⁷ See Yahoo! IR (Sep. 14, 2011). Google and Yahoo! abandoned their proposed arrangement in the face of a threatened challenge by the Department of Justice. Ultimately, Microsoft and Yahoo! entered into a similar arrangement in 2010.

⁵⁸⁸ See *supra* p. 55.

⁵⁸⁹ See, e.g. **GOOGKAP0-000006280-95** (2010), at 83 (discussing revenue improvements from lowering revenue share and standardizing AdSense agreements with publishers); Business.com IR (Jun. 15, 2012); Time Warner Cable IR (Sep. 8, 2011).

⁵⁹⁰ Amazon IR (Feb. 15, 2012).

⁵⁹¹ *Id.*

⁵⁹² Google has offered this remedy to the European Commission as part of its settlement proposal. See Google-EC Settlement Proposal at 15-16.

⁵⁹³ Google has offered this remedy to the European Commission as part of its settlement proposal. See Google-EC Settlement Proposal at 26-27.

⁵⁹⁴ Acquisio IR (Sep. 12, 2011); Resolution Media IR (Nov. 7, 2011); Microsoft IR (Sep. 23, 2011).

⁵⁹⁵ Google has offered some version of a non-exclusivity remedy to the European Commission as part of its settlement proposal, but has excluded certain classes of syndication partners from its proposal. See Google-EC Settlement Proposal at 21-22. As such, we do not believe that Google's offer is sufficient to remedy the conduct addressed in this memorandum.

⁵⁹⁶ Adam Kovacevich, *Google's Approach to Competition*, Google Public Policy Blogspot, May 8, 2009, <http://googlepublicpolicy.blogspot.com/2009/05/googles-approach-to-competition.html>.

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