Review of the likely effects of Google's proposed Commitments dated October 21, 2013 ("Second Commitments")

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1. Introduction

In May, 2012, the European Commission published its preliminary conclusion that Google limits choice in Internet search by (among other things) giving Google's vertical search services (including Google Shopping and Google Hotels) more prominent page placement and links than it gives to its rivals in these areas. On April 25, 2013, in its first set of proposed voluntary commitments (hereinafter Google's "First Commitments"), Google proposed to resolve these concerns by providing more prominent placement for selected competitors' websites ("three rival links,") and by adding a label and disclosure that would indicate which services are and are not provided by Google. The stated purpose of these proposals is to give consumers an effective choice among vertical search services offered by Google and its rivals.

We submitted an expert report in this matter on July 1, 2013, in which we analyzed the impact of the First Commitments. Based on market studies that we conducted in the U.K., we found that the First Commitments, if enacted, would not address the Commission's stated concerns and materially restore competition in the vertical search markets at issue. The European Commission did not accept the First Commitments.

On October 21, 2013, Google submitted a second set of revised commitments (hereinafter Google's "Second Commitments") to the European Commission. On October 28, 2013, Google's Second Commitments were released to various parties, including FairSearch Europe, for comment. The modifications include, but are not limited to, certain enlargements of the three rival links box, changes in the display of the three rival links for mobile devices, and changes to the language of the proposed disclosure pop-up box that is supposed to enable consumers to clearly distinguish between paid and unpaid links, and between Google's specialized (vertical) search results (including Google Shopping and Google Hotels) and Google's generic (unpaid) search results.

We were retained by Clifford Chance, advisors to FairSearch Europe (hereinafter "Fairsearch"), to conduct market tests on the proposed changes, and to render opinions as to the likely impact of Google's Second Commitments proposals on Internet users/shoppers. Specifically, we were

Experts' background and qualifications are detailed in an Appendix. A copy of Franklyn's Curriculum Vitae is attached as Exhibit A. A copy of Hyman's Curriculum Vitae is attached as Exhibit B. Franklyn and Hyman have written two law review articles about consumer perceptions and the Internet, including an article published in Spring, 2013 in the Harvard Journal of Law and Technology, and a forthcoming article on search bias and search neutrality. Copies of these articles are attached as Exhibits C & D.

See April 25, 2013 Google Commitment Proposal.

asked to test the visibility and consumer understanding of Google's Second Commitments proposals.

We designed and conducted three online surveys in the United Kingdom that measured the likelihood that consumers would click on any of Google's Second Commitments three rival links. We tested the likelihood of consumer click through on images similar to those that would appear on non-mobile and on mobile devices. If consumers do not click on the three rival links, then Google's proposed remedy would not be meaningfully visible to consumers or likely to reflect the natural choices of consumers--and therefore would not be likely to restore competition in these areas, and maximize consumer welfare.

The survey also measured whether respondents recognized and understood Google's modified label and disclosure. If consumers do not recognize and understand Google's label and disclosure, then they would be even less likely to exercise a meaningful choice between Google's vertical search services and the same services offered by Google's competitors.

As explained more fully below, we found Google's Second Commitments are not likely to materially increase or restore consumer choice or competition in the vertical search markets at issue. Google's Second Commitments do not achieve the Commission's stated objective of materially increasing the visibility of rivals and the awareness of those rivals by consumers. Specifically, we found that:

- A. Google is the first stop for the overwhelming majority of users that employ a search engine to locate products and hotels.
- B. The "three rival links" gather only a modest number of consumer clicks, both in absolute terms and relative to clicks on Google Shopping and Google Hotels.
- C. Incremental increases in consumer attention that may accrue under the Second Commitments are unstable and easily destroyed by changes to Google's search results page.
- D. Presenting rival links in a competitively neutral fashion is a relatively straightforward matter. Parity of rival link presentation improves consumer welfare.
- E. Consumer confusion persists as to the difference between Google's vertical search results and other search results. Instead of reducing consumer confusion about search results, Google's proposed disclosure/explanation materially increases confusion.

II. Survey Methodology

Between November 12 and November 20, 2013, we completed three on-line surveys of a total of approximately 3,500 respondents residing in the United Kingdom.³ More specifically, using a series of simulated searches, the surveys examined:

The survey was administered by Survey Sampling International (SSI) to a demographically representative sample of Google users in the United Kingdom. We excluded from the analysis surveys that were not completed from an IP address in the UK.

- Whether the Second Commitments resulted in a material number of clicks on any of the proposed rival links;
- The effect of other modification to search page layout and labeling on click patterns;
- The effectiveness of the disclosure accompanying the rival links in communicating basic information.

To examine these issues, we designed a series of multi-part interactive Internet surveys. The surveys are attached as Addendum A. The results presented in this report are based on respondents who completed the entire survey (with no missing results), and took more than 5 minutes to do so. We were left with a total sample of approximately 2,500 completed, useable respondents, fairly evenly divided across all three surveys. For the combined results, the margin of error on the figures we report is $\pm 2\%$ for a 95% confidence interval. For any given survey, the margin of error is roughly $\pm 3.5\%$ for a 95% confidence interval.

Each survey began with two questions designed to measure participants' general online search behavior. In Survey 1, we then asked respondents to run two sets of searches – one for an Apple iPod and the other for a Nikon camera. In Survey 2, we asked respondents to run two sets of searches – one for an Apple iPod and the other for a Razer headset. In Survey 3, we asked respondents to search for a hotel in Madrid.

We chose these three searches in order to test three hypothetical sample product searches (here iPod, Nikon camera, and Razer), and one hypothetical locational search (here a search for a hotel in Madrid). Respondents were asked to click on the link they would have selected if they were trying to buy an iPod, Nikon camera, or Razer headset, or trying to find a hotel in Madrid. For each survey, respondents first viewed a "native" page of search results (*i.e.*, the search results that would have appeared if an actual Google search had been run without the proposed Commitments being implemented) followed by a series of modified search results, reflecting Google's proposed Commitments, and several variations we developed.

In order to advance through the survey, respondents had to repeatedly run the search query, and then click through on whatever link they selected. Respondents were not allowed to go back to an earlier question after progressing past it. Because respondents had to click on something to advance, our results represent an upper-bound on clicks that would occur in a real-world search environment, where users can simply close the page without clicking on anything.

After viewing the Google native page for each of these searches, respondents saw search results pages incorporating the three rival links specified in the Second Commitments. For the three rival links for the products search, we chose well-known companies that would qualify for inclusion under the terms of Google's Second Commitments; namely, Kelkoo, Pricerunner and Bizrate. These are the same three rival links we used in our July, 2013 market test of Google's First Commitments.

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See Addendum B, Table 1. We separately analyzed the results for the excluded surveys, and found virtually identical results. Thus, our exclusion criteria do not affect our findings.

To validate our findings, we also tested the mobile version of rival links specified in the Second Commitments, along with multiple variations in which we modified the page layout and labeling of the search results page.⁵ Respondents were presented with these variations after re-running various Google searches. Respondents were asked to click on the site where they were most likely to find what they were looking for, *i.e.*, an iPod, Nikon camera, Razer headset or a hotel in Madrid

After completing these tasks, we showed respondents a series of screen shots of actual search results and asked them a variety of questions to determine whether they could tell the difference between the results in various regions of a typical search results page – that is, if they could correctly differentiate between paid and unpaid regions of the page and also identify how certain type of results were generated. We also asked respondents to view Google's proposed disclosure/explanation regarding its specialized vertical search results and asked respondents a series of questions to test their understanding of the proposed disclosure/explanation. We concluded with a series of questions about the demographics of those completing the survey.

III. Findings

A. Google is the first stop for the overwhelming majority of users that employ a search engine to locate products and hotels

We asked respondents how they would go about locating a specific product (iPod) or a hotel in a city they didn't know. Of those who responded that they used a search engine to perform these tasks, Google accounted for 95% of respondents searching for an iPod, and 94% of those searching for a hotel in a city they didn't know. We obtained comparable results when we asked a similar question previously (compare Tables 2A and 2B in our initial report).

B. The three rival links in the Second Commitments gather only a modest number of consumer clicks, both in absolute terms, and relative to clicks on Google Shopping and Google Hotels.

We tested the three rival links proposed in the Second Commitments.⁶ Table 1A presents the results for Products, and Table 1B presents the results for Hotels.

As Table 1A shows, in a product search, the three rival links garnered 0.9%-2.9% of total clicks, compared to 36.7% of total clicks on Google Shopping.⁷

Our goal in testing these variations was to provide a baseline for assessing the impact of layout and labeling on consumer search behavior. Because our primary task in this engagement was to test the proposals in the Second Commitments, we focus on them in this report. Copies of the images that are referenced in this report are attached as Addendum C.

These variations are based on the images contained in Google's Second Commitments.

By "Google Shopping" we are referring to all clicks in the specified region, and not simply the blue link at the top of the region, "Shop for ipod on Google."

The Second Commitments also authorize the shading of the region containing the rival links. We

Table 1A: Click Rates on Second Commitments Proposal – Non-mobile Product Searches

Type of Link		
	Pricerunner	2.9%
Rival Links	Kelkoo	1.2%
	Bizrate	0.9%
Google Shopping		36.7%
All Vertical Search Options		41.8%
All Other Link Types		58.2%
Total		100%
Share of All Vertical Search Options	Pricerunner	7.0%
	Kelkoo	3.0%
	Bizrate	2.3%
	Google Shopping	87.7%

For ease of comparison, the bottom four rows in Table 1A ("Share of All Vertical Search Options") compute the percentage of clicks on each of the three rival links and Google Shopping compared to the total clicks on all vertical search options on the search results page. This figure is effectively the "market share" for each of the specified rival links and for Google Shopping if we assume the Second Commitments are implemented. As these rows indicate, in a product search, any given rival link secured 2.3%-7% of vertical search clicks, compared to 87.7% of vertical search clicks for Google Shopping.

separately tested a shaded region, and found a modest increase in the absolute number of clicks on the three rival links (from 5% to 7.7%), and a reduction in the number of clicks on Google Shopping (from 36.7% to 28.4%). In combination, this meant that Google Shopping's share of all vertical search options declined slightly, from 87.7% to 78.7%. Further testing will be necessary to determine whether this finding is robust.

⁸ We define clicks on all vertical search options as the sum of clicks on Google Shopping, Pricerunner, Kelkoo and Bizrate.

Table 1B presents similar information for our hotel search.

Table 1B: Click Rates on Second Commitments Proposal – Non-mobile Hotel Searches

Type of Link		
	Expedia	3.8%
Rival Links	Priceline	0.9%
	Trivago	2.3%
Google Hotels + Places		28.1%
All Vertical Search Options		35.1%
All Other Link Types		64.9%
Total		100%
	Expedia	10.9%
Share of All Vertical Search	Priceline	2.5%
Options	Trivago	6.7%
	Google Hotels + Places	79.9%

Table 1B shows that in a hotel search, the three rival links garnered 0.9%-3.8% of total clicks, compared to 28.1% of total clicks on Google's vertical search options (Google Hotels + Google Places. As in Table 1A, the bottom four rows in Table 1B compute the percentage of clicks on each of the three rival links compared to the total clicks on all vertical search options on the search results page. As these rows indicate, in a hotel search, any given rival link secured 2.5%-10.9% of vertical search clicks, compared to 79.9% of vertical search clicks on Google's vertical search options.

Table 2A presents comparable results for mobile search images for Products, and Table 2B presents the same information for Hotels. We tested two versions: the "Plain" version (which has the text "Other Sites" in the lower right hand corner of the Shopping and Hotels boxes), and a "Pop-up" version (which adds to the Plain version a large notification balloon that contains the text "Tap here for additional product (or hotel) search services," along with a blue button that has the word "OK" in it). ¹²

By "Google Hotels," we are referring to all clicks in the specified region, and not simply the blue link at the top of the region, "Hotels in Madrid, Spain on Google."

We define clicks on vertical search options as the sum of clicks on Google Hotels, Google Places, Expedia, Priceline, and Trivago.

The Second Commitments also authorize the shading of the region containing the rival links. We separately tested a shaded region, and found a modest increase in the absolute number of clicks on the three rival links (from 7% to 9.3%), and a slight reduction in the number of clicks on Google Hotels & Places (from 28.1% to 27.6%). In combination, this meant that Google Hotels & Places share of all vertical search options declined slightly, from 79.9% to 74.8%. Further testing will be necessary to determine whether this finding is robust.

Table 2A: Click Rates on Second Commitments Proposal – Mobile Product Searches

Commitments Variation		Plain	Pop-up
Type of Link			
"Other Sites" Link		0.3%	0.2%
Google Shopping		43.3%	33.8%
All Vertical Search Options		43.6%	34%
All Other Link Types		56.4%	66%
Total		100%	100%
Share of All Vertical	"Other Sites" Links	0.7%	0.6%
Search Options	Google Shopping	99.3%	99.4%

Table 2B: Click Rates on Second Commitments Proposal – Mobile Hotel Searches

Commitments Variation		Plain	Pop-up
Type of Link			
"Other Sites" Links		0.0%	0.1%
Google Hotels + Places		29.4%	29.5%
All Vertical Search Options (Including Places)		29.4%	29.6%
All Other Link Types (Excluding Places)		70.6%	70.4%
Total		100%	100%
Share of All Vertical	"Other Sites" Links	0.0%	0.4%
Search Options	Google Hotels + Places	100.0%	99.6%

As Tables 2A and 2B reflect, when we test the Mobile version of the Second Commitments, there are effectively <u>no</u> clicks on the "Other Sites" links in any of the variations. For ease of comparison, the bottom two rows in Tables 2A & 2B ("Share of All Vertical Search Options") compute the percentage of clicks on the "Other Sites" links and Google's vertical search options compared to the total clicks on all vertical search options on the search results page. ¹³ As this row indicates, in the Mobile setting, "Other Sites" links account for 0.6%-0.7% of clicks for products (Table 2A), and 0.0%-0.3% of clicks for hotels (Table 2B). (We treat the actual popup notification balloon as an "Other Link Type) in both Tables 2A and 2B, since it only appears once, and is not, in fact, a vertical search link/option.

One further complication: in mobile applications, a user must first click on the "Other sites" link, and then select a particular rival link on which to click. We test only respondents' initial click through, so our results reflect the maximum percentage of clicks on all rival links combined – and that only if we (implausibly) assume that no users click back or simply close the search results page.

Tables 1A & 1B demonstrate that the percentage of non-mobile clicks on rival links is only

We define clicks on all vertical search options on product search results pages as the sum of clicks on Google Shopping, Pricerunner, Kelkoo and Bizrate. We define clicks on vertical search options on hotel search results pages as the sum of clicks on Google Hotels, Google Places, Expedia, Priceline, and Trivago.

modestly higher than in our market test of Google's First Commitments (there, it was never more than 2%). However, click through rates for rival links in the Second Commitments continue to lag far behind click through rates for Google's own vertical search results. And, in the mobile context (Tables 2A & 2B), none of the versions we tested attracted more than a trivial number of clicks, even when the pop-up notification balloon was present, thereby calling attention to the "Other sites" link. 14

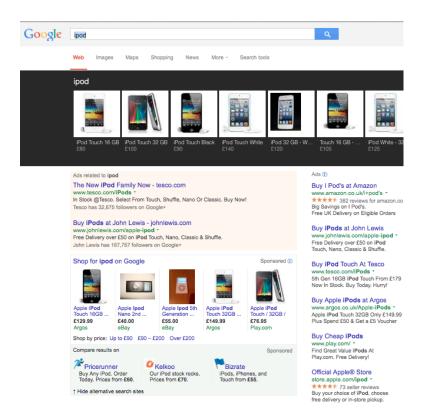
C. Incremental increases in consumer attention that may accrue from the proposed rival links are unstable and easily destroyed by changes to Google's search results page.

We found that any incremental increases in consumer attention that might arise as a result of enhanced presentation of rival links in the Second Commitments is subject to dissipation if Google were to introduce new search features, specifically a search feature that it has already introduced elsewhere (e.g., in the United States). This search feature is allowable under the Second Commitments.

Specifically, we presented respondents with a page of search results that contained the following banner-strip at the top of the page of search results that included the three rival links as proposed in the Commitments:

this report (0.0%-0.3% for the plain images for Product and Hotel searches). The first report did not contain a popup image, so direct comparison of the percentage of clicks on the "Other sites" link for that image is not possible.

In our test of Google's First Commitments, we tested the proposed text for mobile uses, but we used a full-size screen image. In our test of Google's Second Commitments for mobile uses, we used an image that looked like a mobile screen. We found comparable click through rates in the earlier report (0.1%-0.8%) versus our findings in this report (0.0%-0.3% for the plain images for Product and Hotel searches). The first report did not contain a pop-



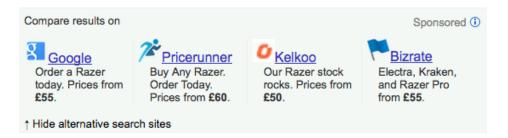
Once we added this banner-strip (which we treated as part of the Google Shopping/Hotels region), click-through rates on shaded rival links on Products searches dropped from 5.1% to 3.4% for products, and from 7% to 4.9% for hotels. Click through rates on the Google Shopping and Google Hotels + Places regions also increased dramatically. In combination, this meant the share of clicks on rival links dropped from 12.3% to 6.5% for products, and from 20.1% to 10.4% for hotels. Thus, in both relative and absolute terms, the introduction of the banner-strip largely negated the additional click-through effect of the Second Commitments (as compared to the First Commitments). In unreported results, we were able to reduce the absolute and relative share of clicks on the rival links further still, by adding a floating pop-up that said "Search on Google Shopping" (or "Search on Google Travel") to the search results page with the banner-strip. The floating pop-up is also allowable under the Second Commitments.

D. Presenting rival links in a competitively neutral fashion is a relatively straightforward matter. Parity of Rival Link Presentation Improves Consumer Welfare

We also tested two variations that we created, to determine how difficult it would be to present search results in a way that would substantially increase consumer attention and click-throughs on rival sites.

In one alternative, we presented respondents with a page of search results that eliminated the Google Shopping or Google Hotels boxes (along with the proposed Commitments three rival

links box) – and replaced those boxes with a single shaded box. The box was headed "Compare prices on," and had icons for four vertical search offerings. The new box contained only icons and names of the vertical search offerings, and some abbreviated text describing the products that were available. Thus, the four vertical search offerings were placed on an even playing field (including equal visual footing) with one another. The image below shows an example of the box from the Razer product search, but we tested this approach in all three surveys.



We presented respondents with two versions of this box: one in which Google appeared in the box as the left-most icon/vertical search offering, and one in which Google appeared in the box as the right-most icon/vertical search offering. This allows us to more effectively isolate the extent to which observed click through patterns are attributable to various factors (including search results page architecture, visually rich appearance of Google Shopping and Google Hotels, and the strength of the individual brands).

Using this approach with a product search, we found that respondents clicked on the individual rival links 3.1% to 9.2% of the time, and clicked on Google Shopping 10.6% of the time when it was the left-most icon/vertical search offering, and 4.3% of the time when it was the right-most icon/vertical search offering. With a hotel search, we found that respondents clicked on the individual rival links 1.0% to 8.4% of the time, and clicked on Google Icon 6.4% of the time when it was the left-most icon/vertical search offering, and 3.2% of the time when it was the right-most icon/vertical search offering. Thus, when we create parity of appearance and placement, we obtain substantially higher click through rates in both relative and absolute terms for the rival links, reflecting the greater visibility of the rival links compared to the status quo. And, click through rates on Google Shopping and Google Hotels drop dramatically, indicating that position on the page and visually rich appearance is an important component in

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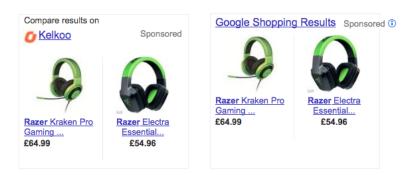
¹⁵ If we look at click-through rates for each of the listed icons, we find Pricerunner received 9.2% of clicks when it was the left-most image, and 6.1% when it was the 2nd image from the left. Kelkoo received 3.1% of clicks when it was 2nd image from the left, and 3.7% when it was the 2nd image from the right. Bizrate received 4.7% of clicks when it was the 3rd image from the left, and 3.5% when it was the right-most image.

¹⁶ If we look at click-through rates for each of the listed icons, we find Expedia received 8.4% of clicks when it was the left-most image, and 5.7% when it was the 2nd image from the left. Priceline received 2.7% of clicks when it was 2nd image from the left, and 1.2% when it was the 2nd image from the right. Trivago received 2.0% of clicks when it was the 3rd image from the left, and 1.0% when it was the right-most image.

¹⁷ Viewed collectively, the three rival links/icons secured roughly 32% of clicks on vertical search options when Google was the left-most icon, and 53% of clicks on vertical search options when was Google was the right-most icon. The results were virtually identical for product searches and hotel searches. These "market share" figures are substantially greater than those we observe when we test Google's Second Commitments. *Compare* Tables 1A & 1B.

the dominance of Google Shopping and Google Hotels. Finally, the fact that click through rates on Google Shopping and Google Hotels drop dramatically when it is in the right-most position (compared to the left-most position) further confirm that position on the search results page, (i.e., the architecture of the search results page, which gives Google's vertical search offerings greater visibility and presence than competitors) rather than simply the strength of the brands of the competing vertical search providers, is responsible for an appreciable proportion of observed behavior.

We found a similar effect when we tested respondents' responses to an alternative variation, where we split the Google Shopping box into two equal-sized and equal-looking boxes. One box was labeled Google Shopping Results and the other box was labeled "Compare results on Kelkoo." Both boxes contained the word "Sponsored," and included two images of the products in question, along with some text. This alternative variation is illustrated below:



We tested this variation with Google Shopping on the right and on the left. We found that parity of presentation resulted in an increase in clicks on Kelkoo when it occupied the left-side box (increasing to 12.2%), compared to the right-side box (6.9%). Clicks on Google Shopping were 23.2% when it occupied the left-side box, and 16.3% when it occupied the right-side box. Thus, both Kelkoo and Google experienced significant increases in clicks when they were on the left side than when they were on the right side -- even though everything else remained the same. These findings show that click through rates on Google's specialized search results are driven in part by the prominent position on the search results page and the more visually attractive (larger and photo-inclusive) presentation of Google's own specialized search results. ¹⁸

We find the highest degree of rival link visibility and resulting consumer attention--and rough parity in click through rates --when rival links are displayed in a manner that is comparable to the manner in which Google's own specialized search results are displayed. The First and Second Commitments do not achieve this objective. Our findings provide some insight into the factors that affect click through rates on vertical search offerings.

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¹⁸ Unsurprisingly, we also observe a brand effect. Google has higher absolute clicks than Kelkoo, irrespective of position. But, the more significant issue is that visibility makes a difference, even after we control for brand effects. Google is as strong a brand when it is on the left side as when it is on the right side. But, Google's share of combined clicks on vertical search options is 77% when it is on the left side, and only 57% when it is on the right side.

E. Consumer confusion persists as to the difference between Google's specialized search results and other search results – and the disclosure actually increases confusion

The Second Commitments provide that searchers who roll-over an icon that currently appears next to the word "Sponsored" at the top right of Google's vertical will see a pop-up disclosure statement. The statement is intended to clarify the origin and type of search results they are seeing.¹⁹ In unreported results, we asked respondents whether they had ever clicked on the icon that appeared next to the word "Sponsored" to see what would pop-up. Only 12%-17% of respondents responded that they had ever done so.

We also presented all respondents with the pop-up disclosure statement, and asked whether the statement improved their understanding of why content appeared on the search results page, made them more confused, or had no effect. Table 3 presents the results.

Table 3: Impact of Google's Proposed Pop-up Disclosure on Understanding of Why

Content Appears

Type of Search	Product	Hotel
Improved understanding	27%	28%
More Confused	43%	44%
No Effect on understanding	30%	27%

Table 3 shows that of those who actually read the disclosure statement, only 27%-28% thought it improved their understanding of why content appeared on the search results page.

We also showed respondents images that reflected the impact of the Second Commitments on the search results page (similar to those we used to generate the results in Table 1). But, these search results pages had each section of the webpage labeled, as "Region A," "Region B," and so on. We then tested whether respondents were able to correctly explain the reason why links appeared in particular regions, such as Google Shopping, the Rival Links Box, and Algorithmic content. We provided seven possible explanations: unpaid algorithmic content; links for which the listed companies pay to appear; price comparison service offered by Google; price comparison service offered by independent third parties; a fanciful control (unpaid links selected by Google's Special Marketing Team); Other; and Don't Know/Not Sure.²⁰

The specific disclosure text reads as follows: "This link is inserted to show more results from Google's Shopping results. For shopping results from other relevant providers, click on the relevant links to other search sites below or see Google's other search results. Ads are based on your current search term. Visit Google's Ads Preferences Manager to learn more, block specific advertisers, or opt out of personalized ads."

Because of the nature of the search results page, more than one explanation might be correct for some of the regions/links. For example, a respondent could correctly answer that links in the Google Shopping region were there because Google had been paid for the link to appear, or because it was a price comparison service offered by Google. Similarly, for the rival links box, a respondent could correctly answer that links in that region were there because Google had been paid for the link to appear, or because it was a price comparison service offered by independent 3rd parties. For these regions, we treated both of the listed answers as correct.

We found little evidence that respondents effectively differentiated paid from unpaid content, or understood that Google Shopping was offering vertical search results. Only 51% of respondents correctly responded that the content in Google Shopping represented either paid content or a price comparison service offered by Google, with responses split evenly among these two choices. This means that 48% of respondents did not understand why links appeared in the Google Shopping box – with responses split among those who thought it was unpaid algorithmic content (14%); those who picked our fanciful Google Special Marketing Team control (18%); those who thought it was a price comparison service offered by independent 3rd parties (6%); and those who didn't know, weren't sure, or picked other (11%). We obtained similarly mixed results when we asked respondents why algorithmic links appeared (only 41.5% correctly responded that these links were selected by Google's computer formula and were unpaid), and why the rival links appeared (only 51% correctly responded that these links were either paid content or a price comparison service offered by independent third parties).

Finally, we evaluated the impact of the disclosure statement on respondents' understanding of why links appeared in the Google Shopping region. We did this by asking them the same question twice – once before and then again after they had reviewed the disclosure statement. We find evidence that the disclosure statement actually reduced respondents' understanding of the issue. In the first set of surveys, the percentage of respondents answering that the links that appeared in Google Shopping were the result of a price comparison service offered by Google declined from 26.8% to 14.4%. The percentage of respondents who didn't know or were unsure increased from 10.1% to 17.2%, and the percentage that selected our fanciful control (i.e., links selected by the Special Marketing Team) increased from 17.8% to 22.1%.

Stated differently, after being exposed to the disclosure statement, the percentage of respondents selecting a correct answer declined from 51.5% to 40.5%. We obtain comparable results for the Hotels survey; after being exposed to the disclosure statement, the percentage of respondents selecting a correct answer declined from 50.4% to 41.8%.

Appendix B includes more detailed information on all of these results. Addendum D contains information on respondent demographics, including self-reported knowledge of search page layout and labeling.

Summary/Conclusions:

- The proposed three rival links do not materially increase consumer awareness or the visibility of the proposed links to large majorities of consumers.
- Large majorities of consumers do not understand the origin of the rival links or their relationship to Google's other links.
- We found only slightly higher click-through rates for the Second Commitment proposals than we found for the First Commitment proposals. We do not believe that the Second Commitments are likely to command materially increased consumer attention or restore competition for rivals that seek to compete with either Google Shopping or Google

- Hotels and Places.
- We found that the proposal rival link remedy is unstable. Modest changes to the appearance of the search results page, such as the addition of a banner-strip similar to the one currently being used in the U.S., eliminate the observed slight increases in visibility and prominence (as measured by the click-through rates on rival links).
- Google Shopping commands a high degree of consumer clicks and attention in part because of its location on the search results page, and the visually-rich display (e.g., pictures and mini-boxes within a box). Google Hotels and Places benefit from similar treatment. Confirming our earlier work, we find that page layout and design is more important than search result labeling in determining visibility and click-through rates.
- We find evidence that consumer preferences reflect both the strength of the underlying brands, as well as the way in which those brands are presented on the search results page. Absent parity of presentation, an appreciable number of consumers will be diverted from their preferred destination, which will reduce consumer welfare. Conversely, consumer welfare is enhanced when artificial impediments to consumer choice are removed and rival sites are positioned in a manner that is visibly equivalent to the positioning and layout of Google's own specialized search results.
- Modifications that do not materially affect page layout are unlikely to change preexisting
 competitive dynamics in search. Modifications in page layout may or may not have an
 impact, depending on their design attributes. Stated differently, we find the highest
 degree of consumer attention and competition for clicks when rival links are displayed in
 a manner that is comparable to the manner in which Google Shopping/Hotels results are
 displayed.
- We find high levels of consumer confusion as to the source and type of search results and a low level of ability to correctly differentiate between paid and unpaid results, or between Google's vertical search and generic search results.
- We find that the proposed Second Commitment disclosure statement does not effectively communicate the necessary information (i.e., whether the region in question is paid v. unpaid, and the location and significance of the "rival links.") Indeed, the proposed language confuses many respondents.

In summary, we find that the proposals offered by Google in the Second Commitments are unlikely to materially increase consumer attention, offer consumers meaningful choices or restore competition (as measured by click rates) in this space. By testing various alternatives, we identified several factors that are more likely to draw consumer attention to rival links, offer consumers meaningful choices and thereby improve competition (again, as measured by click rates) in this space. We also found that Google's proposed label and disclosure – which is aimed at improving consumers' ability to differentiate Google search results from rivals' search results – are actually confusing or misleading to a substantial number of consumers.

Professors David J. Franklyn & David A. Hyman

Appendix

Franklyn is a tenured, full professor of law, specializing in trademark law, at the University of San Francisco School of Law ("USF"). Franklyn is the Executive Director of the McCarthy Institute for Intellectual Property and Technology Law at USF and Director of the Center for the Empirical Study of Trademark Law (CEST). The McCarthy Institute, of which Franklyn is Executive Director, conducts wide-ranging empirical research on consumer perception issues in both the United States and Europe. Franklyn is also the Director of the Masters of Law Program for U.S. and foreign lawyers in Intellectual Property Law at USF. Franklyn teaches and writes primarily about trademark law and consumer perception issues. Franklyn is editor-in-chief and co-author of McCarthy's Desk Encyclopedia of Intellectual Property Law.

Franklyn works in collaboration with Professor McCarthy on a number of projects, including his treatise on trademark law. Professor McCarthy is the author of a seven-volume treatise on trademark law. It is the most-widely cited treatise on trademark law in the United States, having been cited by courts in over 3,500 judicial opinions, including in a recent decision by the United States Supreme Court in a case in which Franklyn was retained as an expert.

Franklyn has consulted and/or served as an expert witness on behalf of numerous clients in numerous cases involving consumer perception issues, including in matters in the United States, Asia, the European Union, the Middle East and South America. Franklyn has been retained as an expert in several matters involving the issue of consumer perceptions. Franklyn was recently was retained by the International Olympic Committee to provide trademark advice and advice regarding the consumer impact of various logos regarding the 2016 Olympic Games. Franklyn is a licensed attorney in Illinois and California. Franklyn has written several law review articles about consumer perceptions on the Internet. Franklyn has also acted as a consultant to several clients in matters related to trademark law, consumer perceptions and the Internet.

Hyman is the H. Ross and Helen Workman Chair in Law and Professor of Medicine at the University of Illinois. He is tenured in both the College of Law and the College of Medicine. He heads the Epstein Program in Health Law and Policy at the University of Illinois College of Law. He teaches and writes about empirical law and economics, principally involving the regulation of health care, and competition law and policy. He is the author of more than 100 articles in student edited law reviews, and peer-reviewed medical, health policy, and law journals.

In competition law and policy, Professor Hyman served as Special Counsel to the Federal Trade Commission from 2001-2004. In that capacity, Professor Hyman was principal author and project leader for the first joint report ever issued by the Federal Trade Commission and Department of Justice, "Improving Health Care: A Dose of Competition" (2004). He has also published numerous other articles involving competition law and policy, including a series of articles with Professor William Kovacic, the former Chairman of the United States Federal Trade Commission.

Hyman has been deposed in various cases involving health care fraud and pharmaceutical pricing, and has testified in one case involving pharmaceutical pricing.