AN EXAMINATION OF THE ANTITRUST ISSUES POSED BY GOOGLE'S ACQUISITION OF ITA

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EXECUTIVE SUMMARY

The proposed merger between Google and ITA Software, Inc. (ITA) offers antitrust enforcers the latest in a series of escalating challenges in which high technology markets seem to be straining the boundaries of antitrust analysis. Apart from the very difficult analysis, however, this transaction raises broader questions of competition policy concerning Google's rapid growth as a one-of-a-kind firm. The deal might even have implications for the future of airline ticket distribution. In this white paper, the American Antitrust Institute (AAI) seeks to identify and explore both the narrow and broad competition issues that are raised by a Google/ITA combination.

In the narrowest sense, acquiring ITA would put Google in the business of supplying a technology input that powers downstream products in a vertical online search market. That is, Google would own what many consider to be the premier technology that online travel agents, travel meta-search websites, and airline websites license from ITA to afford Internet users the ability to search real-time pricing and seat availability data in the course of shopping for airline tickets online. Neither Google nor ITA currently competes in the provision of this data to Internet users by "online travel search" firms, but together they seem to have such firms surrounded. Companies like Kayak, Orbitz and Hotwire, as well as airlines, rely heavily on Google to tell consumers where they can get airline pricing and availability data on the Internet, and they rely heavily on ITA to deliver the data itself.

The Antitrust Division of the Department of Justice (DOJ or the Division) must therefore evaluate the potential competitive effects of a transaction that does not directly accomplish vertical integration in any assumed relevant product market or obviously eliminate actual (as opposed to potential) horizontal competition in any assumed relevant product market, but yet strategically positions a likely monopolist of a nearby and intimately related market to enter the online travel search market with significant competitive advantages. At bottom, the Division will simply have to

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determine whether the effect of the transaction may be substantially to lessen competition. Under the Clayton Act's standard, which calls for the prevention of anticompetitive dangers in their incipiency, this determination will demand sound predictions within a complicated space.

AAI believes that vertical merger standards as they have evolved over the last two decades, along with the potential competition doctrine as it is incorporated in the DOJ's Revised Horizontal Merger Guidelines, are up to the task of steering a proper analysis. The Division should use these tools to explore the risk that Google may acquire market power in the online travel search market or the technology input market, along with the risk that Google's control of ITA would lead to foreclosure or other exclusionary effects, whether directly or indirectly. The Division should also consider whether the transaction might have the effect of raising barriers to entry into the broader online search market, which Google already dominates.

Looking beyond the present merger, one has to wonder about antitrust scrutiny for any future Google acquisitions – including vertical acquisitions that might otherwise appear benign in traditional commercial settings. Questions about the prospect that Google might leverage a broader search monopoly into dominance of distinct vertical search markets through acquisitions seem destined to crop up again. Such questions will persist if Google's suspected online search monopoly is or is becoming entrenched, as will questions about how fairness and neutrality in something as complex and subjective – and necessarily lacking in transparency – as search engine algorithms can ever be monitored and effectively regulated.

From our perspective, governmental efforts to protect against manipulation of algorithms by Google are not only likely to be ineffective, but they will necessarily raise First Amendment questions as the government participates in decisions about the prioritization of information reaching the public. Maintaining competitive markets for both general and niche search may be the only alternative, ultimately, to an unregulatable monopoly. It is therefore appropriate for the government to work within a public vision of longer-term developments and to place the present acquisition within such a context.

INTRODUCTION

In this white paper, we present our analysis of the antitrust issues raised by a Google/ITA combination. Among other things, we explore what Google's dominant presence in the broader online search market means for purposes of this transaction. We examine the possible nature of Google's presence in the market for back-end technology solutions that can access airfare and seat availability information, which Google would be entering directly by acquiring ITA. We also consider the relationship between the online travel search market and the back-end technology solution market, and what that relationship suggests regarding this merger. Our analysis is based on discussions with industry personnel, counsel, and a review of publicly available data and information. We draw no conclusions about whether the acquisition violates the Clayton Act, which is likely to depend on information that is not publicly available. In conducting its economic analysis, reviewing

the internal documents of the merging parties, and soliciting the views of market participants, the DOJ will be tasked with answering these questions and many others.

BACKGROUND

OTAs, such as Expedia, Orbitz, and Travelocity, meta-search sites, such as Kayak and Bing Travel,[1] and airlines and others that compete in the market for online travel search, rely on head-spinning technology to provide Internet users with online access to accurate airfare pricing and seat availability data. These firms require a back-end technology input that can agglomerate flight schedules, routes, seat availability, tariffs, rules and prices, and then index that information and convert it to a searchable format. Compounding matters, the technology must enable automated searching in near-real time to account for query volume and accuracy, respectively.

OTAs, meta-search sites, and airline sites have a limited number of options in solving this difficult problem, which is a prerequisite for their healthy existence. One option is to obtain the information they need from one of three available global distribution system (GDS) suppliers, Travelport, Sabre Holdings (Sabre) or Amadeus.[2] Another option is to license a proprietary software program developed by ITA.

ITA offers a range of products that service online travel search businesses and consumers, but the company's crown jewel is its QPX software solution. QPX can conduct automated searches of airlines' internal reservation systems, aggregate the relevant data, and provide it to OTAs and others in a searchable format, while delivering all the necessary information to book and ticket an itinerary. Since the company was founded in 1996, its QPX software has become very successful, attracting reputable OTA and meta-search licensees such as Orbitz, Kayak, Hotwire and others, as well as airlines like United, Continental, Southwest, US Airways and American Airways.

MARKET DEFINITION

Because of the range of players and products interwoven through the online travel search supply chain, the effects of the transaction could conceivably reverberate throughout several product markets. One of the DOJ's tasks, as in any merger, will be to define antitrust product markets affected by the transaction in an economically relevant way. Theoretically, the merger could impact

[1] As a general matter, meta-search sites and OTAs differ primarily in the scope of their offerings. Like OTAs, meta-search sites aggregate pricing and availability data for comparison shopping. But unlike OTAs, meta-search sites do not directly offer seat booking. Further differences that might impact market definition are discussed in the next section.

[2] GDSs collect and store information about airline pricing and seat availability, as well as related travel services like hotels, rental cars and rail companies, creating an electronic marketplace to facilitate display and distribution of travel-related offerings. Because GDSs do the above, they can act as a source of pricing and availability data for meta-search sites. Because they can also access airlines' internal reservation systems, they can go further for OTAs by enabling their ability to book seats.

the markets for online search (where search engines compete for consumers), online search advertising (where search engines compete for advertisers), online travel search (where OTAs, meta-search sites and airline sites may all compete for consumers), online travel search advertising (where the same may compete for advertisers), online travel search technology inputs (where ITA, GDSs and others may all compete for the business of online travel search firms), and airline distribution of pricing and availability data and airline ticket sales (where airlines compete to attract travelers). Most immediately, the transaction seems significant for its potential competitive effects in online travel search and online travel search advertising, assuming those markets are distinct from online search and online search advertising, respectively. As we will discuss later, however, potential competitive effects in some of the other markets referenced above also merit attention.

We suspect that online search and online travel search will be viewed as distinct markets. The markets have in common that they generate two kinds of demand, consumer demand and advertiser demand. But from a consumer perspective, online search and online travel search products likely are not good substitutes. Online travel search is powered by a technology input that provides consumers with access to airline pricing and availability data, whereas online search offers consumers only traditional search-engine results.[3] Whether advertisers might view online search inventory and online travel search inventory as good substitutes is less clear, though it may be true that the distinctions separating consumer demand for online search and online travel search correspond with distinctions separating advertiser demand for each, which would suggest the products are likely not good substitutes for advertisers either. Based on publicly available information, we can only hypothesize that the two products' respective utility to consumers, underlying costs, and utility and pricing for advertisers differ to the point that a monopolist of one would not lose so many sales to the other as to make a small but significant and non-transitory price increase unprofitable. The DOJ's internal analysis and the merging parties' internal documents, as well as the Division's private conversations with market participants in online travel search, should elucidate these questions further. If online search and online travel search are not good demand substitutes, the product markets will be distinct for antitrust purposes.

Assuming online search and online travel search are distinct product markets, the transaction more obviously threatens to alter the competitive status quo in online travel search and online travel search advertising than in online search and online search advertising. To be sure, the transaction's potential effects in online search are an important aspect of the analysis, particularly to the degree that the transaction threatens to raise barriers to entry in online search. But the consumer and advertiser markets for online travel search face the prospect of significant changes in the nature of competition in myriad ways. These issues, and related issues concerning how the transaction affects the market for technology inputs into online travel search products, form the basis for much of the

[3] As we will discuss below, we recognize that online search seems intimately connected to online travel search, particularly insofar as online search impacts both supply and demand for online travel search products. Yet we also recognize that traditional market definition analysis may not capture this connection. Resolving this dissonance is one of the important analytical challenges posed by this transaction, as is often the case in mergers having aspects of systems competition. *See* Gregory Gundlach & Diana L. Moss, *Systems Competition and Challenges to Antitrust Thinking: An Introduction*, ANTITRUST BULL. (forthcoming 2011).

analysis that follows. We do, however, address the potential effects of the transaction in broader online search. We also examine, near the end of this paper, whether and how the transaction might impact the market for distribution of airline pricing and availability data, along with airline ticket sales.

Even within online travel search, further relevant market distinctions are possible and should be considered. OTAs and meta-search sites seem both to compete in online travel search, but the former are built primarily to attract customers to book seats, while the latter are built primarily to attract advertisers by giving consumers supposedly more robust comparison shopping options. Do consumers and advertisers distinguish between these products in an economically relevant way? And what about "search-engine travel search" products, like Microsoft's Bing Travel, which operate much like meta-search sites but are housed in a broader search engine environment? These products can reach consumers both at early stages of travel planning, where users are exploring travel ideas through the search engine, and at later stages of travel planning, where users are ready to comparison shop airfares and book seats. Furthermore, where do airlines' proprietary websites, where users can search airline-specific pricing and availability data, fit into the market definition equation? The DOJ should examine the prospect of narrower relevant product markets and how any dispositive distinctions impact market shares and concentration, potentially heightening the risk of anticompetitive effects.

One of the confounding aspects of this transaction is that, while the risk of anticompetitive effects seems highly significant in online travel search and online travel search advertising, neither Google nor ITA is directly in these markets in a traditional sense, nor is either company directly entering these markets as a result of the transaction. This fact does not call for blindly dismissing the potential for anticompetitive effects in these markets, but should instead prompt inquiry into whether systems competition considerations should impact market definition analysis.[4] Academic marketing literature recognizes that businesses often compete for customers' "pathways to purchase," whereby strategies are aimed at influencing customers on a broad spectrum as they move through channels en route to purchasing a product. With respect to air travel, for example, an online pathway to purchase may begin with a search-engine search exploring a destination's attractiveness, before proceeding to a meta-search cite to comparison shop airfares, before booking a seat and completing a purchase on an OTA or airline website. It is appropriate for the DOJ to consider whether various firms involved at different stages of online travel research and commerce compete as parts of a system in which search engines, various types of airfare distributors, seat booking engines, and airlines attempt to steer customers through a particularized pathway to purchase. This view recognizes the impact that both Google and ITA might currently have in online travel search and online travel search advertising, even though neither directly offers products in those markets or will do so directly as a result of the transaction. Potential competition analysis can play a role in recognizing this impact as well.

[4] *See supra* note 4.

STRUCTURAL VIEWS OF THE TRANSACTION

Google's proposed acquisition of ITA seems to have vertical, horizontal and conglomerate elements, but not to fit squarely into any of these categories. Because Google is not directly in the market for online travel search, and will not be directly in that market as an immediate result of acquiring ITA, horizontal issues are not immediately evident. But the merger would enable and incent Google to expand into online travel search in the future, using its ITA base to perhaps develop a meta-search product, if not an OTA product. If this possibility is taken seriously, one could view the merger as having a potential horizontal aspect.

At first blush the transaction seems to lend itself to vertical analysis because Google is acquiring an input in the online search or online travel search supply chain. But this is problematic in that the deal does not directly accomplish vertical integration in either of the two assumed product markets. While the transaction otherwise might fit as a conglomerate merger, this would require a determination that ITA's software is a distinct product rather than an input into a product supply chain, which seems wrong. For reasons discussed below, AAI believes the transaction is apt to be viewed primarily from a vertical perspective, but it should be considered from a horizontal perspective as well.

In one view, Google can be seen as taking steps to vertically integrate in *online search* by adding a presence in the back-end technology solution market to its presence in the broader online search market. Right now Google users can query Google's search engine for flights between city pairs or airport pairs (or a combination of the two) and return a Google flight search tool linking users to any participating OTA. Such a query would also return airline advertisements linking users directly to airline websites, along with OTA advertisements, other advertisements, and natural search results.

Post-merger, Google has hinted that it would endeavor to provide pricing and availability data directly on its results page, though it would still direct users to other sites – presumably OTAs or the airlines directly – to book seats. Google says it does not intend to enter the seat booking business. Framing the transaction as a movement toward vertical integration in online search would cast ITA's software as a content-providing input into Google's current online search product. However, merely acquiring ITA does not directly integrate ITA's content with Google's existing search product. Google must still develop an application for ITA's content to its existing search product.

In another view, Google could be seen as vertically integrating in *online travel search* rather than broader online search, but this too would be accomplished indirectly rather than directly as a result of the transaction. Google first has to develop and introduce an online travel search product upon closing the acquisition, as it has hinted it will. Upon doing so, Google apparently would become one of three companies that are vertically integrated in online travel search for owning both a front-end search product and a back-end technology solution. The others are Expedia, which is a successful OTA and has a back-end product called Best Fare Search, and Sabre, which owns Travelocity and has its own GDS. We are not aware of any other companies in online travel search that are not dependent on outside partners for back-end technology solutions.

Framing the transaction as a movement toward vertical integration in online travel search would cast Google's future online travel search product as distinct from its existing, broader online search product, with ITA's software as a content-providing input into Google's future online travel search product. Again, however, Google must develop its new online travel search product before vertical integration takes place.

The relevance of the distinction between characterizing ITA's software as an input into Google's current online search product versus its future online travel search product may seem significant, but market definition considerations counsel otherwise. Because online search and online travel search seem likely to be distinct product markets, it matters little whether, technically speaking, Google will be upgrading an existing product or creating a new product. What's significant for antitrust purposes is that Google is likely entering a new antitrust product market in either case, and in either case it is acquiring an input for the new or changed product in advance of developing the new or changed product itself. Therefore, while the transaction has vertical characteristics insofar as Google is acquiring an input for either a new or changed product, it is not perfectly vertical because a step remains between Google's acquiring ITA and accomplishing vertical integration.

That the transaction is neither primarily horizontal nor perfectly vertical would suggest that it could be a conglomerate merger of complementary products. However, ITA seems more like a content provider than a manufacturer of a distinct product. Its QPX software is uniquely designed to process airline data for purposes of displaying that data over the Internet, which serves relatively narrow purposes of primary use to participants in the online travel search market. Furthermore, Google's public discussion of the transaction has been centered almost entirely on what ITA can do for Google in online travel search. It has not hinted at any designs for wider-ranging applications for the technology, which suggests Google views it more as an input than as a distinct product.

VERTICAL ANALYTICAL APPROACH AND THEORIES OF HARM

Under a traditional vertical analysis, the DOJ might focus on unilateral effects involving dominance and foreclosure. Specifically, the Division might focus on whether Google would be acquiring market power in the online travel search market or the back-end technology input market and whether the transaction would have the effect of foreclosing existing or future competitors. However, the Division can and should also inquire, more generally, whether the transaction creates in the merged firm the ability and incentive to engage in exclusionary conduct directed at smaller, travel-related rivals, or it may create or raise barriers to entry. This analytical approach is more in keeping with modern thinking about vertical merger standards as it has evolved over the last two decades.

LEVERAGING AND UPSTREAM MARKET POWER

A primary inquiry in standard vertical merger analysis is whether the transaction is likely to create or enhance market power in affected markets, in this case the online travel search market and the back-end technology input market. In the online travel search market, Google currently has at most an attenuated presence, assuming that market is meaningfully distinct from the broader online search market. [5] And as we have noted, acquiring ITA does not directly provide Google a competing online travel search product. One could therefore take the view that the transaction does not pose any risk of Google acquiring market power in online travel search; however, this is a myopic view that ignores Google's broader online search dominance.

Understanding whether the transaction is likely to create market power in Google in online travel search requires careful examination of the risks under recognized monopoly leveraging theory. While there is some doubt in the law as to whether there is anything untoward about leveraging a monopoly in one market to achieve a competitive advantage in a second market,[6] it is more clearly unlawful for a firm to leverage monopoly power from one market into a second market where there is a dangerous probability of achieving monopoly power in the second market.[7]

If Google has monopoly power in the broader online search market, which is widely suspected if not yet confirmed by a court, the DOJ should determine whether the ITA acquisition may enable and incent Google to leverage that power into monopolizing online travel search, or come dangerously close, be it through vertical restraints like product bundling, exclusive dealing contracts, or other opportunities that may come available post merger. To some degree a monopoly leveraging analysis may be redundant, insofar as it is coextensive with foreclosure analysis, discussed below. But the DOJ should still evaluate, even absent foreclosure, the danger that Google may monopolize online travel search by way of any unique advantages owing to its online search dominance.

One question in this respect is whether Google's search engine could by itself substantially accommodate a dominant share of the online distribution needs of U.S. airlines, and the likelihood that such an arrangement could come to pass even absent foreclosure in the online travel search market. Part of determining that likelihood turns on whether ITA's technology paired with Google's search engine would give Google a meaningful degree of control over both supply and demand for travel information in the broader online search market, and whether control of supply and demand in the broader online search market could afford the means to monopolize online travel search. To the extent that ITA gives Google the ability to provide pricing and availability data in the broader online search market, and its only competitor with respect to providing such data in the broader online search market – Bing Travel – is an ITA licensee, Google arguably would control the supply of travel pricing and availability information to consumers in the broader online search

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[5] *See supra* note 4.

[6] *See* ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 286-89 (5th ed. 2002); *but see* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263 (2d. Cir. 1979).

[7] *See, e.g.,* Eastmen Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 541 (1992)*; accord* Roger D. Blair & Amanda K. Esquibel, *Some Remarks on Monopoly Leveraging*, 40 ANTITRUST BULL. 271 (1995) (discussing clear unlawfulness of monopoly leveraging in a Section 2 context). Theoretically efficiencies might be in play in a Section 7 context. On the feasibility of monopoly leveraging in spite of single monopoly profit theory, *see* Einer Elhauge, *Tying, Bundled Discounts and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397 (2009).

market. To the extent that Google has the capacity to control the algorithms that dictate the search engine's natural search results and which advertisers appear in paid results, it controls the economically valuable order in which consumers discover online travel search options. In this sense, it arguably controls demand for online travel search products. Meaningful control of both supply and demand for online travel search would seem to pose a dangerous risk of monopolization.

Of course, outright manipulation of search algorithms, if detectable, might constitute an antitrust violation in its own right, and public awareness of the skewing of search results would seriously threaten to undermine Google's core product, which is a reliable search engine that users trust.[8] So even if Google would have the ability to control both supply and demand for travel information in online search, it is questionable whether it would have the incentive.

A determination would also remain as to whether such control would be meaningful to the point of facilitating dominance in online travel search. Google's role as a gatekeeper to online travel search is a matter of some dispute. In the course of touting its AdWords program to travel businesses, Google has in the past claimed that 74% of consumers use a search engine "when researching and/or purchasing travel products or services online."[9] One report suggests that currently, search engines "continue to be the primary way that Internet users navigate to key industry categories," and Google is responsible for driving over 30% of the upstream traffic received by firms in the travel category.[10] However, Google's own analysis, using data from another source, suggests that Google is responsible for only about 8% of the traffic received by the top ten travel websites.[11] However, Google's 8% figure factors out what Google considers "lazy search," where for example a user enters the name of an OTA and then links immediately to it.[12] Google believes it is not driving the user to the OTA in these circumstances because the user is already intent on finding it.[13] Of course, users may also use Google's search engine to research OTA options and then proceed to an OTA site without linking through Google, in which case Google does seem to be driving traffic even though this may not be captured statistically. Aided by its internal analysis and access to private

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[8] Presumably the need for users to find a meaningful relationship between a search query and the query's results would act as an inherent check against the threat of anticompetitive manipulation of search algorithms. However, presumably too there is some margin at which manipulation can be employed without unduly threatening that meaningful relationship. The scope of that margin is an important consideration in the course of examining Google's ability to engage in monopoly leveraging.

[9] Google AdWords, *Solutions for Travel*, http://www.google.com/ads/metrics_trav.html (last updated Oct. 2006; last visited Feb. 14, 2011).

[10] Experian Hitwise, *Experian Hitwise Reports Google Monthly Share of Searches at 72 Percent in September*, Oct. 8, 2010, http://www.hitwise.com/us/press-center/press-releases/google-monthly-share-of-searches-at-72-percent-i/. According to the site, Google was responsible for 30.3% of traffic to online travel firms in the month of September 2010, Yahoo for 4.22% and Bing for 3.55%. *Id.*

[11] Google, *Facts About Google's Acquisition of ITA Software; Claims vs. Facts*, http://www.google.com/press/ita/facts.html (last visited Feb. 14, 2011). Google's figures, which are derived using data from Compete.com, suggest that ads from various other websites and instances where users type a web address directly into their browsers are significantly bigger drivers of traffic to OTAs than Google. *Id.* Using Travelocity, Priceline and Expedia as a sample, Google's analysis suggests that between 75% to 79% of traffic to these OTAs is attributable to a combination of "other" sites and users typing directly into their browser. *Id.*

[12] *Id.*

[13] *See id.*

information, the DOJ should determine whether Google's advantages in potentially controlling supply and demand for travel information in the online search market are such that the transaction poses a dangerous probability of Google monopolizing online travel search.

The transaction also impacts the upstream market for back-end technology inputs, which Google would be affirmatively entering through ITA. The prospect of Google/ITA market power or monopoly in the back-end technology solution market is something that publicly available information does not clarify. It seems clear that ITA's software system is a superior product, which likely precipitated Google's interest. ITA can claim Orbitz, Kayak, Hotwire, Bing Travel and other OTAs and meta-search sites as licensees, as well as a host of airlines and others. Furthermore, Hotwire and TripAdvisor, which are owned by Expedia and presumably could opt for Expedia's own Best Fare Search, use ITA instead.[14] And reports have estimated that ITA currently powers a majority of all online flight searches. However, Priceline, Travelocity and Expedia – three leaders in online travel search – do not use ITA. Many successful airlines do not use ITA either. And the existence or significance of barriers to entry in the back-end technology solutions market is not immediately evident.

In inquiring whether the transaction creates market power for the merged firm in back-end technology inputs, the DOJ will have to define the contours of this market and identify ITA's competitors, market share, and product substitutes. Even if the Division determines that ITA has market or monopoly power in back-end technology inputs, however, this would not necessarily prevent Google from consummating the transaction. The pertinent inquiry is whether anything merger-specific may create or enhance market power. Google's broader online search dominance is again implicated in this inquiry; the Division should determine whether Google's unique characteristics as a future supplier of ITA's product may enhance any market power ITA may currently enjoy. The DOJ is likely to make a thorough analysis of this market, aided by the merging companies' internal documents and discussions with other market participants. The results of this analysis will be critical in determining the transaction's potential for exclusionary effects.

FORECLOSURE

Traditional Foreclosure of Existing or Potential Entrants

[14] That two wholly owned subsidiaries of Expedia would forego apparent cost advantages from using Expedia's own back-end solution raises interesting questions that warrant investigation. On the one hand, if the companies are foregoing a marginal cost advantage to use ITA's product, this could potentially speak to high switching costs or QPX's uniqueness and superiority as an input. On the other hand, it bears noting that Expedia's Best Fare Search solution is approximately ten years old, that Expedia acquired Hotwire and TripAdvisor after Best Fare Search was already developed, and that Expedia's Chief Financial Officer has suggested that Best Fare Search was built as an "in-house solution" that is not readily adaptable to being commercialized for third-party use. *See* TNooz.com, *Google-ITA Software Deal: Expedia Boss Issues Stern Warning*, July 30, 2010, http://www.tnooz.com/tag/best-fare-search/. It may simply be the case that Hotwire and TripAdvisor use ITA because it is more affordable than adapting Best Fare Search to fit their needs.

The DOJ should also examine whether the transaction likely may have significant foreclosure effects, preventing either existing or future market entrants from competing. Post-merger, it can be argued that Google will have the capacity to foreclose online travel search competition directly or indirectly. Directly, Google could refuse to license the ITA software to OTAs and others that are dependent on the software. Indirectly, Google could deter entrants by licensing the software on selective or restrictive terms (e.g. devoid of technological upgrades and improvements). A key inquiry in foreclosure analysis involves determining whether ITA's input and the inputs of GDSs and others are adequate substitutes, and in turn whether ITA's input is an essential input. If the inputs are not substitutes, then ITA's input could be deemed essential. If that is the case, foreclosure effects from the transaction would be too likely to ignore.

But Google has suggested that alternatives are available, in the form of GDSs, Expedia's Best Fare Search solution (although Expedia apparently has not yet commercialized Best Fare Search for third-party use[15]), and others. Other leading OTAs apart from Expedia, including Priceline and Travelocity, already use alternative solutions. Furthermore, it should be noted that ITA does not control the underlying data itself, but rather a proprietary means of aggregating and processing that data. The transaction therefore would not prevent others from entering and innovating in the market for back-end airline pricing and availability solutions, though it remains for the DOJ to determine whether barriers to entry are too significant. Given the complexity of ITA's technology and the difficulty of the problem it solves, barriers to entry could prove to be high. Another question, which publicly available information does not clarify, is whether ITA's technology has any lock-in effect, and whether switching costs are high enough that ITA could raise the price of its software a small but significant and non-transitory amount without losing market share.

Ability and Incentive to Engage in Exclusionary Conduct

Modern thinking about vertical merger standards recognizes that traditional foreclosure theory is only one of several means by which a vertical merger can have exclusionary effects. The critical inquiry is whether the transaction creates in a combined Google/ITA the ability and incentive to engage in exclusionary conduct directed at smaller, travel-related rivals, including raising rivals' costs and creating barriers to entry or expansion. Such conduct can offend Section 7 of the Clayton Act.

Raising Rivals' Costs

Traditional foreclosure analysis does not adequately capture the means through which a vertical merger can affect competition in upstream and downstream markets. Post-merger, and upon a sustainable prediction that Google will enter online travel search with its own product, Google will be vertically integrated and competing primarily with un-integrated firms, downstream in the online travel search market and upstream in the back-end technology input market. With the exception of Expedia and Sabre's Travelocity, we are aware of no other online travel search firms that do not have to rely on outside partners for back-end technology inputs. The DOJ should ask: will a

[15] *See* TNooz.com, *Google-ITA Software Deal: Expedia Boss Issues Stern Warning*, July 30, 2010, http://www.tnooz.com/tag/best-fare-search/.

combined Google/ITA lead to an increase in the price of back-end technology solutions for OTAs, meta-search sites and airlines, thereby creating and increasing market power for Google? Will the combination lead to lower revenues and in turn higher marginal costs for GDSs and other back-end technology solutions, thereby creating and increasing market power for ITA's QPX product?

Even if ITA's input is non-essential and firms could switch if ITA raised the price of QPX by a small but significant and non-transitory amount, the prospect of anticompetitive effects is not rendered a nullity if the vertically integrated, merged firm would have market power upstream and would be competing with un-integrated competitors downstream. Such a scenario creates conditions that could allow the merged firm to "squeeze" rivals, and the DOJ should examine whether the merged firm would have a post-merger ability and incentive to do so, giving rise to a risk of exclusionary effects. For example, if Google's downstream entry in online travel search will likely lead to reduced demand and lower prices for downstream competitors' advertising inventory, the merged firm could squeeze downstream competitors by reducing, short of eliminating, access to QPX if reduced access to QPX would lead to increased demand and higher prices for back-end technology inputs. Likewise, the merged firm could squeeze upstream rivals (e.g. GDSs) by taking the opposite tack of expanding access to QPX, thereby reducing demand for, and in turn revenue from, competing upstream products, such that upstream alternatives become less of a competitive constraint on QPX or are induced to exit the market. Google has said it intends to honor all competitors' existing contracts with ITA, and most online travel search firms that oppose the transaction have expressed the opposite fear that Google would not renew such contracts or otherwise refuse to do so on adequate terms. The DOJ should consider the prospect and effects of both a contracted and an expanded presence for a Google-owned QPX in the back-end technology input market.

At first blush, these potentially anticompetitive strategies might seem a good fit for a combined Google/ITA. But they can only come to pass if Google successfully enters the downstream markets for online travel search and online travel search advertising and achieves market power in the upstream market for back-end technology solutions. As we have reiterated, Google currently does not have an online travel search product to display pricing and availability data, and acquiring ITA does not directly give it one. For that reason, the sustainability of a prediction that Google will successfully enter online travel search directly, including by leveraging a monopoly power in broader online search to achieve market power in online travel search, is critically important to evaluating the transaction. The sustainability of a prediction that a merged Google/ITA would have market power upstream in back-end technology inputs is equally important. The DOJ must determine whether and how quickly Google is likely to become a significant player in online travel search, capable of rapidly taking market share, and whether ITA's product as supplied by Google would likely come to dominate back-end technology inputs. The merging companies' internal documents discussing strategic motivations for the deal, which the DOJ can access but AAI cannot, will be crucial in this and many other regards.

It bears noting that, in the wake of the Supreme Court's decision in *Pacific Bell v. Linkline*, "price squeeze" conduct like that described above does not amount to a Section 2 violation, though it may be actionable if the conduct is linked to price predation or amounts to a violation of an antitrust duty to deal.[16] In a forward-looking Section 7 context, the DOJ should examine whether the merged firm has incentives to engage in price predation or whether a price squeeze could amount to altering an existing course of dealing with anticompetitive intent. One or both risks presumably would have to be present before the Division might act upon price-squeeze concerns.

Given the Supreme Court's opinion in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, the DOJ should evaluate the prospect of price predation by examining the likelihood that the merged firm would offer below-cost pricing with a dangerous probability of recouping its sacrifice.[17] Google's incentives to engage in price predation do not seem strong under this standard. First, Google advertising inventory is sold using keyword auctions, a mechanism that would naturally tend to prevent Google from offering inventory at artificially low prices. Even under a hypothetical alternative pricing model, Google could likely achieve a price advantage without resorting to below-cost pricing because of the marginal cost advantage it would enjoy as a vertically integrated firm competing with un-integrated firms. Second, if Google were to undertake a foreclosure strategy aimed at online travel search competitors, it would stand to lose an assured and probably substantial income flow both from licensing ITA's QPX product and selling Google advertising inventory to these firms. The Division would have to determine that the losses sacrificed under such a strategy would not be too great as compared to the possible benefits of a monopoly, discounting for the risk that the strategy might fail.

However, whether a price squeeze strategy might be paired with breach of an antitrust duty to deal is a different question. While antitrust law imposes no generalized duty to deal, district courts post-*Linkline* have held that voluntarily altering a course of dealing that induced reliance by competitors, when coupled with "anticompetitive malice," can be actionable in antitrust.[18] Here, it may be plausible that online travel search firms could have been induced to license QPX by reliance on ITA's status as a stand-alone input supplier, motivated to broadly and continually license its product. Thus the Division should consider whether, through the transaction, ITA would be voluntarily altering its status so as to give rise to an antitrust duty to deal. If ITA's voluntary decision to fold its current business into the business of a firm that will compete with its current customers creates a duty in ITA to continue its role in providing its current customers with their current capabilities, and yet the merged firm would rationally pursue an anticompetitive price squeeze, a cognizable theory of harm may arise under Section 7.

Creating Barriers to Entry or Expansion

[16] 129 S. Ct. 1109 (2009).
[17] 509 U.S. 209 (1993).
[18] *See* Safeway Inc. v. Abbott Laboratories, 2010 WL 147988 (N.D. Cal. Jan. 12, 2010) (citing Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985) and Verizon Communications Inc. v. Law Office of Curtis V. Trinko*, LLP*, 540 U.S. 298 (2004)).

The DOJ should also inquire whether the merger creates or raises barriers to entry or expansion that would lead to anticompetitive harm. Vertical integration can itself be a barrier to entry where entrants recognize the difficulty in competing with a large firm like Google after it adds a marginal cost advantage for owning a back-end technology input supplier to its already tremendous scale and network advantages. However, barriers to entry would pose an even greater concern if, post-merger, new or existing entrants could adequately compete only by entering the market at two levels, i.e. in both upstream back-end technology inputs and downstream online travel search products.

Post-merger, online travel search entrants seeking to use ITA as a back-end technology input might be deterred because their access to a critical input would be controlled by a potential competitor, which poses an obvious business risk. They might also be deterred in developing or enhancing a product tied to ITA if doing so would require disclosure of competitively sensitive information, such as technological innovations, to a potential competitor in Google. It seems clear that incorporating a back-end technology input with a front-end travel search product invariably requires information exchange, but publicly available information does not clarify whether such exchange necessarily demands disclosure of competitively sensitive information. If the DOJ's investigation reveals that these concerns are significant, and existing alternatives to ITA, such as GDSs, are not easily available to entrants or are meaningfully inferior to ITA, the risk that the transaction might create competitively dangerous barriers to entry seems strong.

The DOJ should examine whether GDSs and/or alternative back-end solutions could adequately accommodate online travel search competitors' needs in a manner that would mitigate the risk of barriers to entry being created by Google controlling ITA. If GDSs and/or alternatives could substantially accommodate online travel search competitors, or if the risks of disclosing competitively sensitive information to a future competitor through post-merger licensing of QPX are not serious, the merger may not raise barriers to entry in a manner that offsets proffered efficiencies.[19] However, if the Division finds the opposite is true, and new or existing entrants would have to enter both the back-end technology input market and the online travel search market in order to effectively compete, the Division should definitively resolve this risk. A need to enter at two levels might lead to consolidation at both levels, with existing OTAs and GDSs merging as a competitive response to Google/ITA. In addition, new entrants in online travel search might effectively be foreclosed for having to overcome barriers to entry in the input market alone. As noted previously, publicly available information does not clarify the significance of entry barriers in the input market, but the complexity of the problem that ITA and GDSs solve and the advanced technology that these firms deploy may suggest that entry barriers are high.

Finally, the DOJ should consider whether the merger raises barriers to entry in the broader online search market, where Google faces any competition for its dominant market share primarily from

[19] A substantial body of literature addresses efficiencies associated with vertical mergers. *See, e.g.*, M. Howard Morse, *Vertical Mergers: Recent Learning*, 53 BUS. LAW. 1217, 1223 (1998) ("(i) the reduction of transaction costs, where the elimination of negotiation and execution of contracts reduces associated risk, uncertainty, and opportunism; (ii) the heightened coordination of or synergistic improvements in design, production, and distribution; and (iii) the elimination of double marginalization through internalization of pricing decisions.")

Bing and Yahoo. While in the abstract there is nothing competitively suspicious about a search engine seeking to expand into a vertical search market that is part of the largest existing e-commerce category (valued at $80 billion in 2009), the circumstances here are that online travel is one of the few areas where Google's closest legitimate challenger in broader online search, Microsoft, has made competitive inroads, and Google has chosen to enter online travel search by acquiring a technology input upon which Microsoft relies. Because of Google's dominance in broader online search, the Division should be especially wary of allowing an acquisition that would have the effect of preventing competitors in broader online search from maintaining a level of profitability through vertical markets that might be integral to fostering sustainable entry in broader online search.

HORIZONTAL ANALYSIS

Potential Competition

Although the transaction more obviously lends itself to vertical considerations, horizontal issues do arise and merit attention. Specifically, the transaction should be evaluated for its effects on potential competition in online travel search. Potential competition is premised on the idea that under certain circumstances, a firm positioned on the edge of a market can exert a competitive presence within the market even if it is not actually competing there. If, absent the merger, Google and/or ITA could nonetheless be considered a potential entrant into online travel search, a merger eliminating either's status as such should be evaluated for its effects in online travel search, much as a merger eliminating an incumbent in online travel search would be evaluated similarly. Likewise, if the merged firm would become a potential entrant into online travel search as a result of the combination, the merger should be evaluated for the effects that a combined Google/ITA would have on competition in online travel search.

The DOJ has recognized harm to both actual and perceived potential competition, the former where a merger impacts a potential entrant's prospect of entry through more pro-competitive means, and the latter where a merger impacts the constraining influence that a potential entrant may have on the behavior of incumbent firms. Among other things, both theories presume that a firm will only be a potential entrant to a market if it is positioned at the edge of that market and if it is the only or one of the very few potential entrants into a highly concentrated market.

Commentators have recently argued, and we agree, that distinctions between actual and perceived potential competition are largely irrelevant and unhelpful, because "Courts will hold that a merger violates Section 7 only if each link in the causal chain from the merger itself to the alleged anticompetitive effect is sufficiently strong that the feared effect can be predicted with 'reasonable probability.'"[20] This is true "[w]hether the relationship between the merging firms is described as

[20] Gregory J. Werden & Kristen C. Limarzi, *Forward-Looking Merger Analysis and the Superfluous Potential Competition Doctrine*, 77 Antitrust L.J. 141 (2010).

vertical, horizontal or conglomerate . . . ."[21] The DOJ's revised Horizontal Merger Guidelines, which incorporate potential competition without explicitly adopting the "perceived" and "actual" terminology, support this reading.[22] The Guidelines likewise recognize that the risk of harm is to be judged under a standard that would prevent anticompetitive dangers in their incipiency.[23]

The DOJ should therefore examine the sustainability of predictions embedded in a causal chain whereby (1) Google and/or ITA is currently positioned at the edge of the online travel search market; (2) this presence has salutary effects on competition in that market; (3) the transaction undermines those salutary effects causing harm to competition; and (4) such harm is not counterbalanced by offsetting efficiencies that could not be achieved through more procompetitive means. Likewise, the DOJ should evaluate a causal chain whereby (1) the merged firm *will become* positioned at the edge of the online travel search market; (2) this presence will have harmful effects on competition in that market; (3) the transaction facilitates those harmful effects; and (4) such harmful effects are not offset by efficiencies that could not be achieved through more procompetitive means.

Absent the merger, Google can arguably be seen as positioned at the edge of the online travel search market insofar as it is a starting point for users looking to engage in online travel search and a driver of traffic to OTAs, airlines and others. ITA can arguably be seen as positioned at the edge of the online travel search market insofar as it offers users a free, non-monetized, QPX-powered product called Matrix, which allows consumers to search airfare pricing and availability data much like a meta-search website. With Matrix in place, along with a user-friendly website, ITA perhaps already competes in the consumer market for online travel search, and it presumably would face relatively minor technological impediments to monetizing Matrix by selling advertising inventory. Of course, ITA's pre-merger status as a potential entrant into online travel search must be considered in light of the perhaps scant likelihood that the company would risk alienating its online travel search customers by independently competing against them for the sale of advertising inventory.

As to current salutary effects on competition in online travel search, the DOJ would have to examine whether Google or ITA currently exerts any constraining influence on incumbent firms' pricing behavior, and whether the transaction eliminates that influence. As to future harmful effects on competition in online travel search, the Division should consider whether the intermediate step of acquiring ITA creates in Google an influence in online travel search, and whether that influence is harmful to competition, perhaps by deterring future entry in signaling to future entrants its competitive advantages. On the question of achieving efficiencies through more procompetitive means, the Division should examine whether any efficiencies could be achieved by Google licensing ITA's technology rather than acquiring it. Opponents of the acquisition have suggested that Google

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[21] *Id.*; *see also* John E. Kwoka, Jr., *Mergers That Eliminate Potential Competition*, *in* RESEARCH HANDBOOK ON THE ECONOMICS OF ANTITRUST LAWS (Einer Elhauge ed., forthcoming 2011), *available at* http://www.ios.neu.edu/j.kwoka/PCMergers.pdf.

[22] *See generally* U.S. Dep't. of Justice & FTC, *Horizontal Merger Guidelines* (2010).

[23] *Id.* § 1.

could enter more pro-competitively by doing just that, but Google has countered that merely licensing the ITA technology would stifle its opportunity to innovate in online travel search.

The DOJ should evaluate the sustainability of these and all other predictions embedded in reasonable causal chains that would impact potential competition in online travel search. However, it should also take into account, as our proffered analysis suggests, market concentration, ease of entry in online travel search, and the nature of Google's and/or ITA's hypothetical entry advantage. All of these factors will determine whether there is a reasonable probability of anticompetitive harm to potential competition.

INNOVATION AND CHOICE

Diminished innovation and loss of consumer choice are cognizable harms to actual or potential competition, and in a proper analysis of the transaction, these non-price effects should be considered in addition to price effects. Many of the analytical precursors to predicting the transaction's price effects will not differ meaningfully as to its non-price effects, but such effects elucidate the full scope of potential anticompetitive harm. Thus, in the course of considering the risk that Google would quickly come to dominate online travel search, be it through monopoly leveraging or otherwise, the DOJ should consider the impact that a dominant Google would have on innovation. Likewise, in considering the risks of foreclosure to the extent that Google would control an important input into competing online travel search products, the Division should explore harm to consumer choice.

Post-merger, Google's incentives may shift from continuing to drive traffic to as many other online travel sites as possible (to generate advertising revenue), to forestalling such traffic to some degree and focusing instead on more lucrative partnership agreements with airlines or select OTA's, aided by leveraged bargaining. ITA's incentives as part of Google also could shift from licensing its product as broadly as possible (to maximize software revenue) to strategic licensing aimed at an optimal combination of generating software revenue while steering traffic toward Google (to maximize advertising and partnership revenue to go along with software revenue). Myriad other changes in incentives could arise under various strategies.

Changed incentives, particularly as they pertain to steering innovation, are an important consideration in understanding potential anticompetitive effects. When Google enters a new market, short-term innovation often quickly ensues. The company's track record in this respect is excellent, and it should be lauded accordingly. But in the longer term, innovation might suffer if Google emerges to dominate online travel search. Empirical literature suggests that innovation in monopolized markets lags innovation in competitive markets, or it is otherwise channeled toward marginal improvements that do not challenge the monopoly. On the other hand, dynamic, high technology markets have proven themselves subject to sudden, transformative shifts, which can open the door to further innovation even when it appears closed. This is no rote banality in the analytical equation, as evidenced by the manner in which Apple's entry into the mobile advertising

industry impacted the Federal Trade Commission's investigation of Google's acquisition of AdMob. The DOJ should explore how the transaction is likely to affect innovation incentives, albeit with due regard for potential shifts in the nature of competition in high technology markets.

A dominant Google in online travel search would also have uniquely important effects on consumer choice. Consumer choice in online travel search not only facilitates improved online travel search offerings, but it is an important guarantor of access to information, a check on airfare and search advertising prices, and a facilitator of airline discounting practices. To the extent that consumers enjoy wide choice in online travel search, they are more likely to discover all available airfares and routes that would accommodate their needs. And it is this wide access to online travel search offerings that forces airlines to compete for the business of consumers and search providers to compete for the business of advertisers. Here, too, the DOJ should make a careful evaluation.

SUMMARY AND POTENTIAL REMEDIES

To summarize, we identify five broad avenues of inquiry in our evaluation of the transaction – four vertical and one horizontal – and three forms of potential anticompetitive harm. Framing the transaction as vertical, we believe inquiry is warranted into (1) whether the transaction may create or enhance market power in the merged firm (or pose a dangerous probability thereof), in online travel search, in the back-end technology input market, or in the broader online search market; (2) whether the transaction is likely to have the effect of foreclosing existing or future entrants in online travel search due to an ability and incentive in the merged firm to directly or indirectly deny access to an essential input or to raise online travel search rivals' costs or because barriers to entry are created; (3) whether the transaction is likely to have the effect of foreclosing existing or future entrants in the back-end technology input market due to an ability and incentive in the merged firm to raise back-end technology rivals' costs or because barriers to entry are created; and (4) whether the transaction is likely to have the effect of foreclosing existing or future entrants in the broader online search market because barriers to entry are raised. In the course of evaluating raising rivals' costs theories in conducting the second and third inquiries, *Linkline* counsels further examination into whether the transaction might give rise to an antitrust duty to deal in ITA.

Framing the transaction as horizontal, we believe inquiry is warranted into whether the transaction threatens a reasonable probability of anticompetitive harm to potential competition in the online travel search market. As to the types of anticompetitive harm threatened, we believe inquiry is warranted into whether the transaction would lead to (1) higher prices for back-end technology inputs and online travel search advertising inventory; (2) injury to long-term innovation in back-end technology inputs and online travel search; and (3) injury to consumer choice in online travel search, which impacts airfare pricing transparency, consumer access to travel information, comparison shopping and discounts, and advertiser access to online travel search advertising inventory.

If, in the course of making these and other inquiries, the DOJ determines that it should intervene, the parties involved will likely entertain the prospect of negotiating behavioral conditions that would

allow the deal to survive. To address foreclosure concerns, the government might insist that Google continue to make ITA's technology available to competitors in online travel search, consistent with any upgrades or improvements, at non-discriminatory prices and on reasonable, fully transparent commercial terms. However, the details of such a compromise may be tricky; it is difficult to predict what kinds of changes may be in store for the technology, and in turn what reasonably should be available to competitors and at what price. The Division might further require that the merged firm forego any kind of exclusive dealing agreement with an airline, and it might seek a firewall to prevent ITA licensees from having to disclose competitively sensitive information to Google in its capacity as a potential competitor.

Conditions to address monopoly leveraging concerns may be even more difficult. Presumably the government would seek to extract a commitment from Google not to favor its online travel search product over others in its search engine algorithms or on its results page, but this condition seems nearly impossible to police. The difficulties associated with an intermixing of Google's search engine and its future online travel search product are discussed in more detail below. The DOJ might also require that Google forego any kind of product bundling that would tie the sale of any of Google's advertising inventory to the merged firm's sale of products for distributing airline pricing and availability data.

META-CONCERNS AND CONCLUSION

Although not necessarily outcome-determinative of the DOJ's present investigation, a multitude of broader questions should pervade at least informal discussion of the transaction. Does Google's acquisition of ITA portend a fundamental shift in the way consumers purchase airline tickets? Would such a shift occur absent this transaction? Are the risks to this transaction inherently unique, or simply unique to Google? Likewise, will any vertical acquisition by Google raise similar concerns? Where is Google headed as a rapidly growing one-of-a-kind firm, and could it conceivably end up as a regulated public utility?

The Future of Airline Ticket Distribution

Of primary interest to many is whether and how Google's acquisition of ITA could change the dynamics of airline ticket distribution in the United States. One might imagine, post-merger, that Google would seek to contract directly with the airlines in obtaining raw pricing and availability data to funnel through ITA's QPX product and eventually display within Google search results. Airline industry receptiveness to this strategy would presumably be strong, as the further it can strive toward a "direct connect" framework in providing pricing and availability data to consumers, the more it can reclaim economic power in ticket distribution by eliminating costs associated with middlemen. Such a result could be on balance pro-competitive if cost-saving efficiencies would be passed on to consumers in the form of lower prices or fewer fees, without offsetting negatives. One would have to look closely at the likelihood of Google becoming dominant in online travel search,

and any increase in prices or injuries to consumer choice and long-term innovation that would be threatened by this result.

In a parallel development, which may or may not be implicated by the transaction, American Airlines is beginning to push for a direct-connect framework of its own accord. Since it unveiled this strategy, Orbitz and Expedia have dropped American Airlines flights from their respective search results. Sabre, a leading GDS, reportedly has delivered notice to terminate its agreement with American Airlines.

If the American Airlines strategy becomes a trend and other airlines follow suit (Delta reportedly has withdrawn its fares from three second-tier OTAs), such a development, with its tipping point potential in a network context, could cut either for or against the transaction. On one hand, if the industry is undergoing an organic transformation anyway, the merger's impact could be downgraded. As in Google/AdMob, observers may cite changes in the nature of competition as evidence that intervention is not necessary. On the other hand, if American Airlines and any followers are merely setting the table for a post-OTA, post-GDS world where Google offers a direct-connect framework, the transaction might instead be helping to propel an airline ticket distribution transformation. And Google might stand to become the primary conduit for U.S. airline ticket distribution, aided by an ability to help airlines target customers using its troves of consumer information and a capacity to bundle the sale of pricing and availability distribution with the sale of search advertising inventory.

With the advent of the Internet age, where airlines no longer require discrete electronic clearinghouses to store pricing and availability data to make it available to travel agents, we may be moving toward a period where GDSs are viewed largely as superfluous relics. This may be particularly true if products like ITA's QPX can enable automated searching of airline pricing and availability data in near-real time at a lower cost than GDSs, and more so if the airlines themselves are developing the technological wherewithal to provide OTA, meta-search and carrier-direct customers with the ability to conduct adequate online searches.[24]

Another threat to GDSs, and possibly even to OTAs, is a developing trend in which airlines have been unbundling their service offerings. Airlines are developing discrete fee schedules for food, baggage, priority boarding and seating, unaccompanied children and more. From a competition viewpoint, this may represent a form of innovation, or at least product differentiation, but it also will result in an increase in the consumer's transaction costs in making comparisons between airlines on a given route. Particularly if this information is not made available to GDSs and/or OTAs.

[24] American Airlines recently reached a new agreement with ITA, but it is not clear whether access to ITA's technology is a necessary precursor to implementing the direct-connect strategy, or if American could do it on its own. However, the airline has suggested that ITA will play a role in its access to distribution channels. *See* Travel Daily News, *American Airlines Selects ITA Software for Next-Generation Availability Engine*, Jan. 18, 2011, http://www.traveldailynews.com/pages/show_page/41066-American-Airlines-selects-ITA-software-for-next-generation-availability-engine. More than the technological wherewithal would likely be necessary for airlines to successfully transition to direct-connect distribution on a broad scale.

Of course, airlines have consistently relied on multiple distribution channels to sell their products and services, and it is not clear how successful they might be by actually disentangling their interests with those of GDSs and OTAs, assuming they could. On the other hand, if GDSs and OTAs are in fact moving toward obsolescence, consider a direct-connect world where meta-search is the sole surviving form of third-party distribution of airline pricing and availability data, but the need to discover further information about unbundled services drives more traffic and bookings to airlines' own proprietary websites. In the wake of a direct-connect transformation and a technological race to most affordably accommodate what remains of airlines' third-party distribution needs, a combined Google/ITA would have a significant competitive advantage, and the likelihood that the merged firm would quickly come to dominate the markets for online travel search and back-end technology inputs seems stronger. Ultimately, a meaningful prediction about the future shape of airline ticket distribution is beyond our expertise and beyond the scope of this paper, but we believe these events warrant close monitoring in the context of this merger as they continue to unfold.

The Contours of Google's Growth and Where Does It Lead?

As Google has expanded its business from online search into various other products and services, sometimes quite successfully and sometimes less so, an underlying question repeatedly arises. What is the nature and potential reach of Google's economic power owing to its online search dominance? Until this issue is understood to an adequate degree, all of Google's acquisitions – including vertical acquisitions that might otherwise appear benign in traditional commercial settings – seem destined to be shrouded in confusion and subject to protracted regulatory scrutiny. Outside the high technology sphere, competition principles ordinarily welcome entry by innovative and well-funded players into new markets. But online markets are different from traditional markets. Both businesses and antitrust enforcers are still learning the extent of the role that online search and search advertising play in online commerce. As if predicting the future, which merger analysis inescapably demands, weren't already difficult enough!

As Google moves toward (or has already arrived at) a point where increased scale offers diminishing returns in broader online search, a surviving ecosystem of specialized, vertical search markets seems to be moving squarely into the company's strategic crosshairs. These vertical markets, which like online travel search, serve specialized needs, require unique inputs and/or technology, and are narrow enough to prevent Google's tremendous scale advantage from overwhelming competition, are in a sense all that remains of the online search frontier. And while vertical markets are often characterized by healthy competition in well-defined segments owing to the difficulty that horizontal participants have in meeting the market's specialized needs, online search verticals do not necessarily follow this principle.[25] As Google enters by acquisition these profitable vertical spaces that competitors rely on to sustain a presence in broader online search, its hypothetical search monopoly moves closer to becoming entrenched, if it is not already.

[25] Google, for example, seems already to have conquered maps, books, and video, to name three.

Some have suggested that Google may be on a path that leads to government regulation.[26] It has been noted, for example, that the common law common carriage doctrine has long been applied to information carriers in the United States, including telephone, telegraph and radio transmission firms.[27] And it has been suggested that "questions of private discrimination will always have a central place in the regulation of communication," particularly for the "concentrated Internet speech intermediaries of our time [that] look and act like [common] carriers."[28] It is appropriate to ask whether the Internet marketplace's need for an assuredly non-discriminatory Google might raise the specter of regulation under a modern interpretation of the common carriage doctrine.

Government regulation of Google would be a terrible outcome, as much for traditional rationales favoring competitive over regulated markets as for practical difficulties, if not impossibility. As if to underscore the significant stakes that would prompt calls to regulate Google, the European Commission and the State of Texas are currently investigating whether Google uses its search algorithms to favor its own products or those of its partners over others.

One has to wonder how these allegations can be meaningfully investigated, let alone how a hypothetical regulator could ever protect against algorithmic discrimination. Google's search and ad placement algorithms are reputed to be extremely complex, and subjective decisions are necessarily embedded in their construction. A neutral fact finder would likely have inordinate difficulty in determining whether an algorithmic change was truly a pretext for self-dealing or other exclusionary behavior. Furthermore, Google's algorithms are proprietary and kept secret for good reason, not the least of which includes preventing web spammers from grinding the search engine to a halt. Any government regulation would therefore have to take place in a "black box," which would not instill a great deal of consumer confidence. Finally, government intervention into the free flow of information on the Internet, determining what information will be highlighted to the public and what information will be effectively suppressed by a very low priority, would raise legitimate First Amendment concerns. For all of these reasons, Google, the government and the American public should embrace a shared interest in making sure that antitrust catches up to the lightning speed at which online commerce moves. This much is essential in preventing a regulatory outcome that nobody desires.

Conclusion

The Revised Horizontal Merger Guidelines recognize "Congressional intent that merger enforcement should interdict competitive problems in their incipiency and that certainty of anticompetitive effect is seldom possible and not required for a merger to be illegal."[29] Adherence to an incipiency standard implicitly contemplates looking as far enough into the future as sustainable

[26] Tim Wu, *Is Filtering Censorship? The Second Free Speech Tradition, in* THE FUTURE OF THE CONSTITUTION SERIES 1, Brookings Institution, Dec. 27, 2010, http://www.brookings.edu/~/media/Files/rc/papers/2010/1227_censorship_wu/1227_censorship_wu.pdf

[27] Id. at 4.

[28] Id. at 13-14 (describing Google as the most obvious among a handful of firms that are uniquely positioned to control speech in the United States).

[29] U.S. Dep't. of Justice & FTC, *Horizontal Merger Guidelines* § 1 (2010).

predictions about the reasonable probability of anticompetitive harm will allow. It is clear that a governmental vision will be needed as to how Google can be regulated effectively if it is not to be regulated by a competitive market. The transaction now under review, therefore, should be seen in a larger context.

While this larger context does not itself offer discrete grounds for a Section 7 challenge, it affords a sobering look at the stakes involved in accurately predicting the effects of this transaction. Mindful of these stakes, if it determines after a thorough investigation that the consummated transaction would yield a reasonable probability that the forces of competition may be unable effectively to prevent or ameliorate future anticompetitive conduct, the DOJ would be wise to intervene.