



How Google Monopolised Online Mapping & Listings Services

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Introduction

In the two years since the European Commission opened a formal antitrust investigation into Google's abusive conduct in the online search and search advertising sectors, there has been a continuing rise in the number of complainants calling upon regulators and the courts to intervene to address Google's behaviour. These have come from all sides of the online ecosystem, including online mapping and listings companies, such as Hot Maps, Euro-Cities, Streetmap, Bottin Carto and Verband freier Telefonbuchverleger (VfT).¹

Notwithstanding the pending complaints, Google continues to pursue and has indeed accelerated its anticompetitive strategy to secure the success of its own services, in particular Google Maps and Google+ Local, at the expense of competing online mapping and listings companies.

In May 2012, the European Commission announced that it was willing to enter into settlement talks with Google on some of the grounds for complaint. The scope of settlement talks remains unclear and it is not known whether discussions with Google are limited to how Google can restore competition to the desktop or whether they go as far as to include the mobile platform. It is also unclear what plans the Commission has for looking into the specific complaints relating to online mapping and listings services.²

Background

Historically, maps have served as vital military and commercial tools and, as we show in this paper, their contribution to the online economy has great potential. The role of online maps has transformed with the popularity of satellite navigation systems and with the growth of the Internet. In France, for example, the number of unique visitors to online mapping sites has more than doubled from 2008 to 2012. Google's conduct in mapping and listings has major implications for the future of European innovation, growth and consumers.

Online maps and listings have evolved significantly over the years: from a simple tool to establish one's location to a means *"to sell [people] stuff"*.³ And as Internet usage goes increasingly mobile, mapping and listings sites have become even more valuable to people on the move. In Google's words, *"[i]t's fair to say people aren't searching for different things on mobile, they're just searching at different times."*⁴

Some 50% of mobile queries are said to be looking for local content⁵ and a study published by NewMedia TrendWatch shows that *"95% of smartphone users have looked for local information."*⁶ Moreover, according to a report published by the Local Search Association, searches carried out on an Internet yellow pages site and/or on a search engine for desktop have been decreasing since 2010, while such searches on smartphones and tablets have been increasing.⁷ Online mapping tools are uniquely well-adapted to these developments.

Online Mapping Services

There are many features common to online mapping services, such as an image of a map, search functionality, tagged locations, a route finder, etc. Online mapping sites have evolved from simple positioning systems (sometimes with directions) to providing information on businesses and services in a specified area. As Figure 1 below depicts, typical components of an online mapping site include: a query box for users to search for locations; a map image featuring points of interest (POIs) including sales points embedded by businesses; online advertising (revenue generating); and links to other services, including third party websites, such as booking.com (also revenue generating).

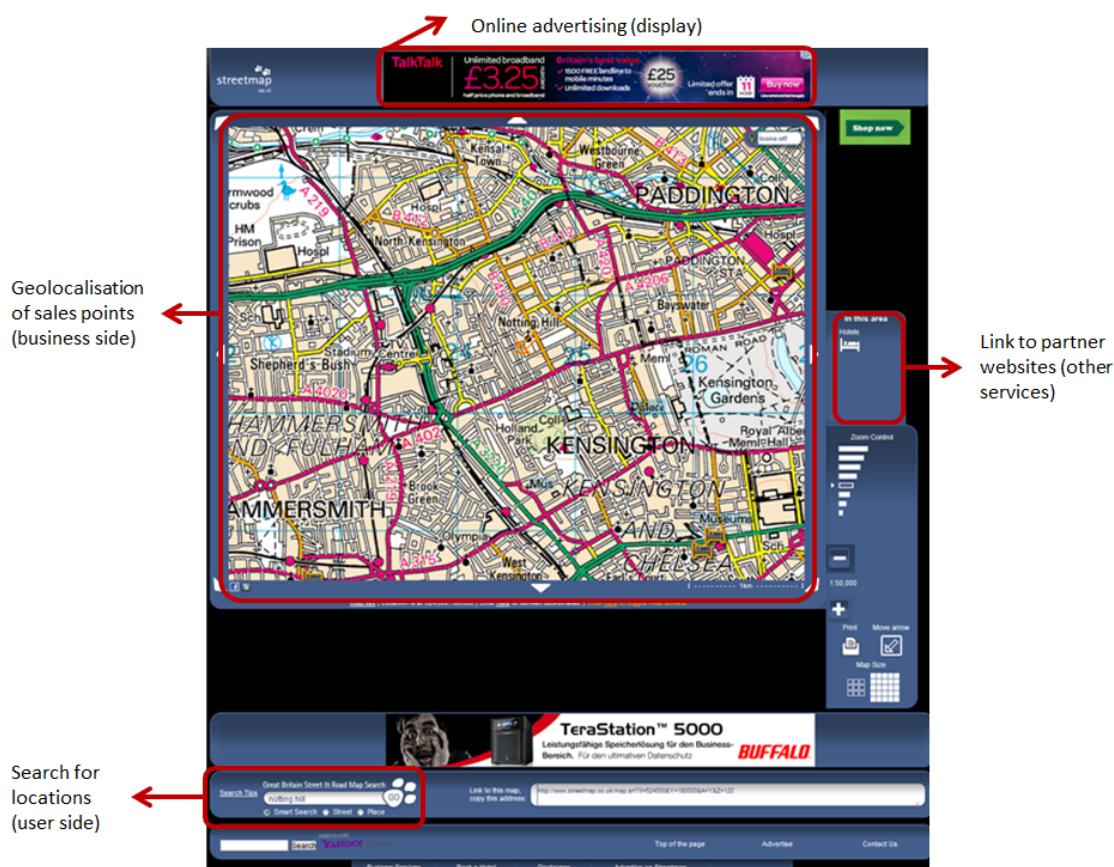


Figure 1: Example of an Online Map Source: www.streetmap.co.uk

Thus, as with many other online services, online mapping sites serve two distinct customer groups: users and businesses. Users turn to these sites for a wide variety of purposes: to get from A to B, to search by postcode or for nearby businesses, restaurants, shops, banks, transport and medical facilities, to check opening hours, to plan their holidays, to search for properties, to map out journeys, etc.⁸ For businesses, mapping sites offer, among other things, geolocalisation of sales points which enable them to insert useful information into online maps, such as their points of sale, contact details and opening hours.

Listings and mapping sites serve as highly effective tools for promoting businesses of all sizes, but in particular for small businesses, increasing their opportunities for revenues through online sales, by attracting customers to their brick and mortar outlets through listings or through online advertising.

To be able to offer online maps, mapping companies need to purchase cartographic data, which is usually licensed by long-established cartographic companies, such as Navteq, TomTom and TeleAtlas,

or public bodies, such as the UK's Ordnance Survey and Germany's Federal Office for Cartography & Geodesy. This data is then processed by online mapping companies to create online maps which are rendered or adapted and then uploaded to the site. To monetise these activities, online mapping companies use a combination of business models:

- Display advertising (next to a map);
- Search advertising (below a map or in the search field);
- Paid listings;
- Payment for sales point display, *i.e.*, marking a point of sale within the map;
- Payment for Application Programming Interface, known as "API", enabling the display of the map on a third-party website;
- Various other forms of syndication and licensing to third parties.

Google Maps was launched in February 2005 to "*simplify how to get from A to B*". Google Maps is a web mapping service offered free-of-charge to users which provides road maps, together with a route planner, and in many countries, an urban business locator.⁹ Since June 2005, Google Maps has also offered a business service, Google Maps API, which enables businesses and web developers to integrate Google Maps into their own websites.¹⁰ In 2007, Google began offering its Street View service in some countries (which was later rolled out globally).

Google was by no means the pioneer of the online mapping world. The French mapping service Mappy, the UK mapping sites Streetmap and Multimap, and the German mapping services Euro-Cities and hot.doc (Hot Maps), all began offering Internet maps in the late 1990s.¹¹ In the early 2000s, the online mapping sector was a flourishing and competitive marketplace with a plethora of national, regional and international players of all shapes and sizes, including innovative start-ups and big players, such as MapQuest.

Google's mapping site lacked popularity in its early days. At the beginning of 2007, MapQuest had 429% more US visits than Google Maps¹² and Google's attempts to make its mapping services more appealing were largely a failure. This continued until Spring 2007, when Google introduced a new way of ranking and displaying search results, which Google called "Universal Search". As is well documented, Google uses Universal Search to rank its own services at the top of Google Search results, driving search traffic to those services and away from competing services.

Google continues to find new ways to bolster its online mapping services. Its recent application to the Internet Corporation for Assigned Names and Numbers (ICANN) for the top level domain name ".map" is perceived by many as a clear bid to gain control over this fundamental generic term, with a view in the future to steering users to Google's own mapping products.¹³

Today, Google Maps and Google Maps API have very high market shares in Europe. Statistics for France show that in terms of unique visitors to mapping sites in 2012, Google Maps had over 70% of visitors for the month of May – more than three times as much as in 2008. Approximately 50% of desktop users and businesses use Google Maps and Google Maps API.¹⁴ In the words of map expert, Professor Jerry Brotton, Google Maps has become "*basically a location device for advertising*".¹⁵ According to Professor Brotton, "*Google is dominating [the mapping] market and continues to dominate it.*"¹⁶ Indeed, Google Maps has been described as Google's core asset: "*the base layer of all of Google's local endeavours, and will be the point around which the majority of Google products will revolve, if that's not already the case.*"¹⁷

Online Listings Services

Online listings services provide an even more focussed service than those offered by online maps and reflect the principles underlying the traditional hard copy telephone listings, familiar from before the Internet age. The purpose of listings is to exhaustively set out and classify businesses and services into categories within a defined geographic location, together with providing contact details. The French Competition Authority, in its opinion on online advertising, identified common features intrinsic to listings services, such as a pricing model based on a flat-fee for a determined period and limited choice in terms of keywords, for example, professional activities, within a specified geographic location.¹⁸ As can be seen in Figure 2 below, online listings homepages tend to feature two search boxes: for business type (“I’m looking for”) and geographic location (“in”). As can also be seen from Figure 2 below, listings sites can combine their results with a map.

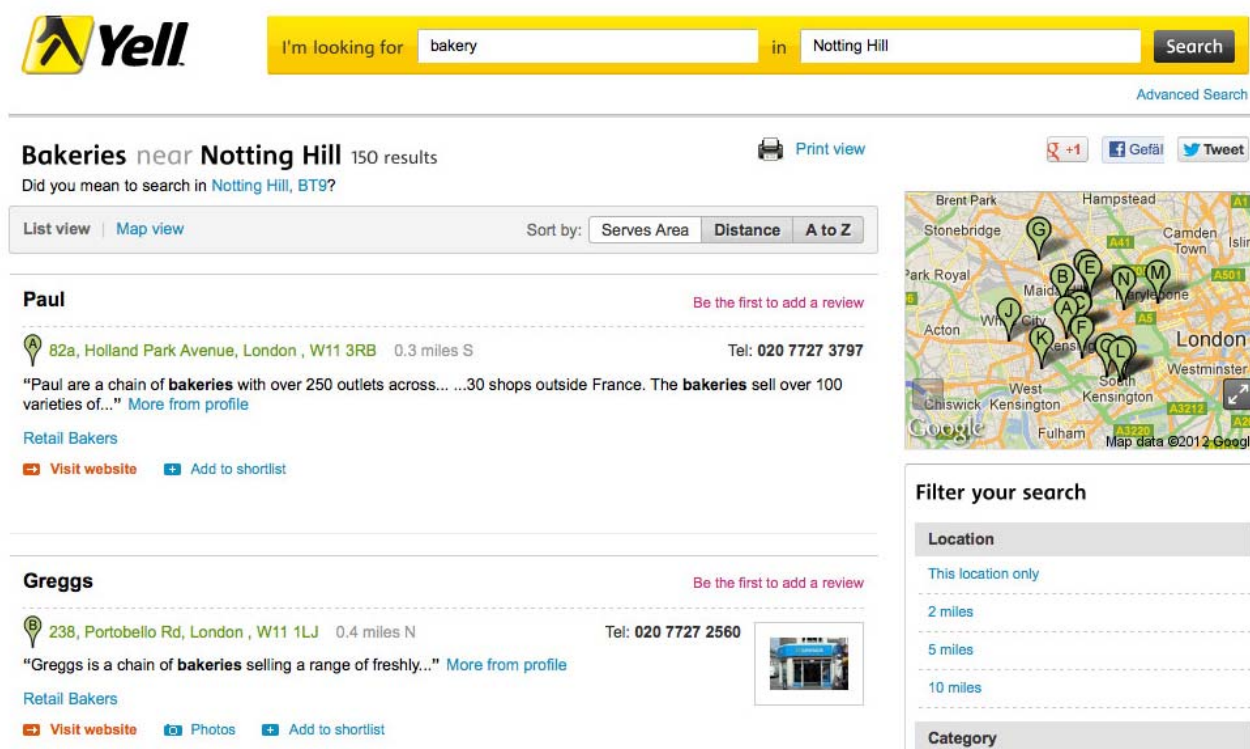


Figure 2: Yell Homepage Source: <http://www.yell.com/>

Overlap between Mapping & Listings Services

There is a growing overlap between online mapping and listings services. Mapping sites increasingly provide information on local businesses and users frequently visit maps to identify nearby services, clicking through to the business' site or accessing contact details.

Data published in surveys and reports on user behaviour confirm that consumers visit both listings and mapping sites to find local businesses.¹⁹ In the 2008 in-depth investigation into a merger between two companies active in online and print directories, the Dutch Competition Authority concluded on the basis of user surveys that online media, and most notably Google, served as an alternative to the parties' services.²⁰ Today, according to the Local Search Association, 76% of US adults used a search engine to find a local business in the year running up to June 2011.²¹ Moreover, another Local Search Association report published in April 2012 revealed that 71% of users turned to search engines as their main source to find information on businesses and services, while the use of listings had decreased

(down to 41%).²² As Google has posted on its own website: “97% of consumers search for local businesses online.”²³

Google’s services have evolved significantly: Google started out as an online search engine without a map and later began offering a simple mapping service. It has since branched out to provide maps, local search, listings, contact details and other information on businesses and services. Google Maps, both separately and in combination with other Google services (such as Google Maps API, Google Search, Google AdWords and Google+ Local), has increasingly become a competitor not only to online mapping service providers but also a much closer competitor to listings services.

The French Competition Authority stated in 2010 that Google Places (a precursor of Google+ Local which interacted with Google Maps) “is comparable to the functionality offered by Pages Jaunes or the sites of online directories linked to telephone directory operators (like ‘118 000’, ‘118 712’, etc.). If Google were to enrich paid-for priority online directory listings or tab enhancement offers, this would be in direct competition with the online directory listing of Pages Jaunes. [...] In the future, Google will no doubt be in a position to exert a degree of competitive pressure on Pages Jaunes thanks to its Google Places offer integrated into the Google Maps service.”²⁴

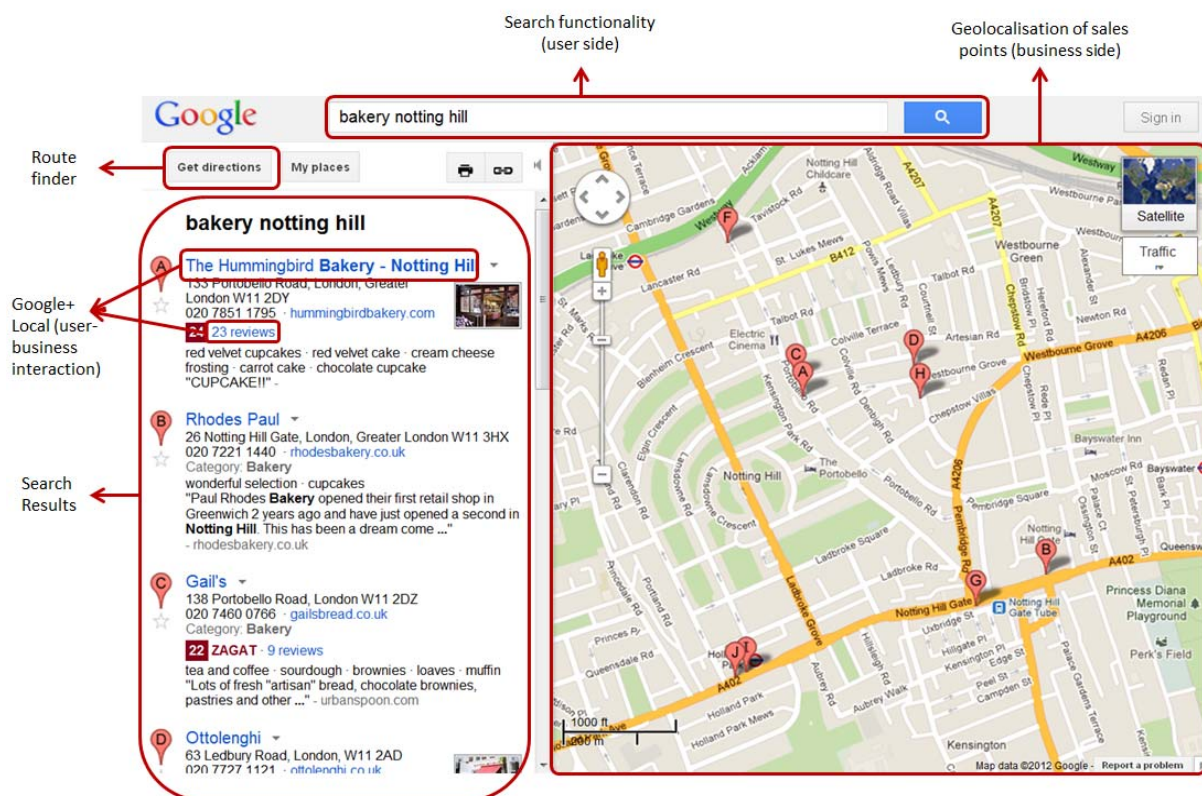


Figure 3: The “Google Map Experience” Source: <http://maps.google.co.uk>

The French Competition Authority was prescient in predicting Google’s efforts to integrate its maps with listings: “[T]he fact that Google has started offering clickable tabs in four US cities could indicate its intention to enter this local directory listing market with more traditional money-making schemes.”²⁵ It comes therefore as no surprise that as at 2012 searchable and clickable tabs feature in Google Maps in order to indicate sales points for professionals and businesses.

Moreover, in May 2012, Google transformed its Google Places into Google+ Local, a service that actively targets the commercial needs of businesses by promoting their goods and services. Businesses can now upload information about their points of sale (e.g., address, opening hours, contact details, photos, etc.) to Google+ Local. Google+ Local then interacts with Google Maps as well as other services, such as Google Street View, Google Search, Google AdWords, Google+, Google Weekly Ads and Google Favourite Places to provide the “Google Maps Experience”.

This “portfolio effect” enables Google users to search for nearby businesses or services, click on ads and review business ratings, alongside the map image. In this way, Google has transformed its formerly individual services into a hybrid mapping-listings tool and used its dominance in search, online advertising and maps to foreclose rivals from providing competing services.

Against this backdrop, some listings websites have concluded agreements with Google. In June 2009, Gelbe Seiten (the German equivalent of Yellow Pages) entered into a co-operation agreement with Google which allowed the latter to use and display entries and offers from Gelbe Seiten in its maps and search results, in exchange for free of charge ads on Google’s advertising platform.²⁶ In a different context, in a hearing in September 2011 on the topic “The Power of Google: Serving Consumers or Threatening Competition?”, Yelp revealed to the US Senate Judiciary Committee that it had felt compelled not to block Google Local from copying its content, as it feared doing so would lead Google to delist Yelp from Google’s search results page. Even after Yelp had relented, it is understood that its review pages were unfavourably ranked in Google’s search results.²⁷

Google has also sought, through acquisitions, to further expand its Google Maps and Google+ Local experience and to protect these services against competition from local search offerings. Recently, Google has acquired a number of companies which it is likely to integrate into its Google Maps services:²⁸ the travel guide, Frommer’s, and the restaurant review service, Zagat, for incorporation into Google+ Local; Punchd, a software enabling businesses to run loyalty programs on smartphones; Talkbin, a feedback platform for businesses; DailyDeal, a group coupon site; and most recently Wildfire, an online marketing managing company. Some of these services have already been incorporated into Google Maps, for example Zagat, which can be seen in Figure 3 above. Moreover, Google intends to incorporate many of these technologies into its new Google Business Builder service, in a bid to bring even more small businesses into its realm.²⁹ In this way, Google’s mapping and listing portfolio is taking the shape of an advertising platform, boosting Google’s advertising revenue streams, which amounted to USD 36,531,000,000 in 2011.³⁰ As observed by Professor Brotton in his book “A History of the World in Twelve Maps”:

“At the centre of Googlenomics are the company’s geospatial applications. As AdWords allows companies to target their advertisements more effectively, so Google Earth and Maps locate their product in both physical and virtual space.”³¹

Google's Anticompetitive Strategy

Preferential Treatment & Discrimination against Online Mapping Rivals

Universal Search has long been identified as a prime tool in Google's abuse of dominance and was the first of the four concerns noted by the European Commission as a breach of EU competition law in May 2012. Universal Search was introduced in Spring 2007 and has since been used by Google to discriminate in favour of its own services and against its competitors, including competing online cartographers. Google openly admitted its preferential treatment of its own mapping services when discussing the roll-out of Google Finance:

"So we had the five top finance sites in their order of their popularity listed there. So we roll out Google Finance, we did put the Google link first. It seems only fair, right? We do all the work for the search page and all these other things, so we do put it first... But that has actually been our policy since then because of Finance we implemented in other places. So for Google Maps again, it's the first link."³²

Per Marissa Mayer, Google

Former VP of Search Products & User Experience
Seattle Conference on Scalability, 23 June 2007

Google's CEO Larry Page more recently suggested how Google had used Universal Search to gain control over online mapping and to push third parties (including its biggest rival in this sector, MapQuest) out of this competitive space:

"Seven years ago we started to work on maps, you know, and you think about that, that was before phones, smartphones [...]. If you think back then, we had the same kind of criticisms [regarding entering sectors already served by third parties]: **"oh, there's already MapQuest", anybody heard of them? I mean no-one uses them anymore, I think so. [...]** We like people to be able to use maps. [...] When you have folks that control distribution, that's not usually a good place for Google, we like people to get our products and to get the products we like producing. So you know we continue to evaluate that, **we generally like people getting our products but we are not fully in control of those things** on every platform in the world."³³

Per Larry Page, Google CEO

Q&A Session of Zeitgeist Americas Partner & Customer Conference, 16 October 2012

Through its Universal Search offering, Google leverages its dominance in search into online mapping services, favouring its own mapping services and pushing competitors down its rankings. As a result, competitors can attract fewer visitors, which means that their revenues decline and they have fewer funds to invest in new search features or in expanding their businesses. In short, Google's manipulation of search results impedes competitors' ability to compete by depriving them of important traffic as well as incentives to invest and innovate.³⁴ In the words of Streetmap: *"One cannot imagine the financial tsunami which Google can unleash upon your business: in just a matter of one month after the implementation of Universal search our like for like turnover had dropped 40 percent."*

With over 90% of the search market in Europe, Google uses Universal Search to drive significant traffic to its own online mapping services, which rank first in its search results. Complainants such as Streetmap, Hot Maps and VtT have all pointed to Universal Search as a key Google tactic to impede their ability to compete fairly. By way of example, a search for the query “maps” on Google Search ranks Google Maps and its related services first and foremost.

Even search queries lacking geographic criteria, for example, the name of a specific supermarket, sometimes return a Google Maps result on the basis of the user’s location. Furthermore, as pointed out by Streetmap in its complaint to the European Commission, a query on Google Search for a UK postcode returns Google Maps not only as the first result but with a significantly enhanced display, such as a highlighted image, embedded maps and additional links to other Google services (see for example Figure 4 below).³⁵ In contrast, at the time of Streetmap’s complaint (in March 2012), Streetmap ranked 9th in a google.co.uk UK postcode search and 16th for the same search on google.be and at that time, no other online mapping service (other than Google’s) ranked above Streetmap.

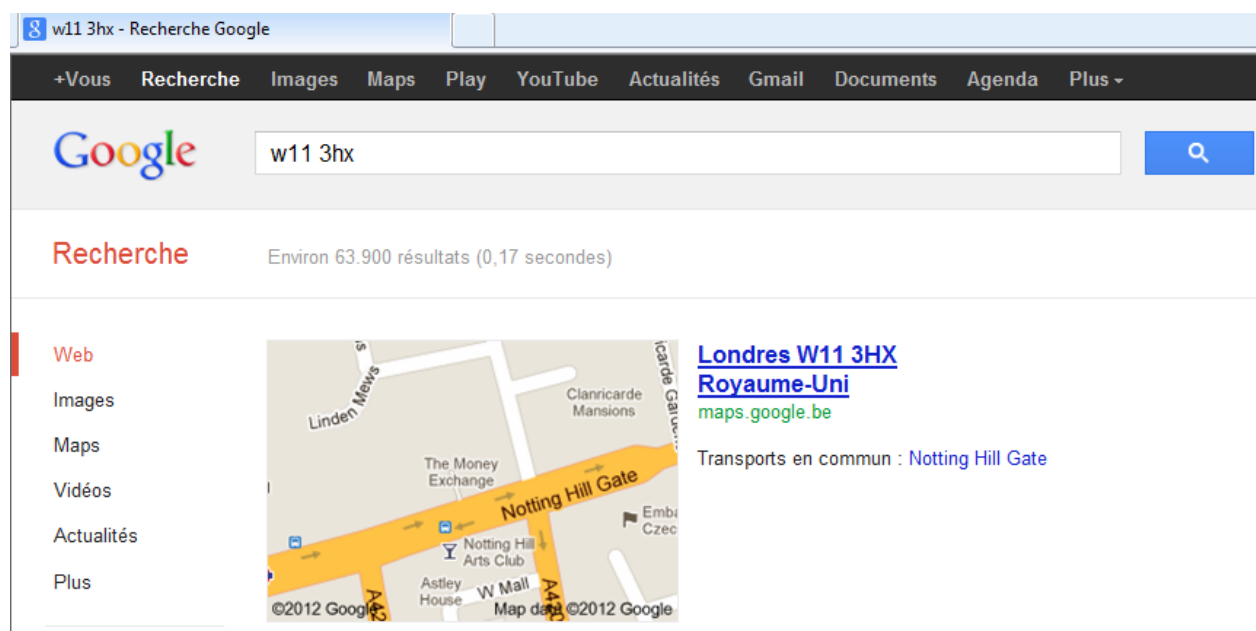


Figure 4: Google Maps ranks first in Google Search for a UK Postcode Source: <http://www.google.be/>

This preferential treatment of Google’s own services is particularly effective in boosting the success of its offerings, to the detriment of competitors and consumers. In order to attract traffic and be visible to users, it is vital for online companies to rank high in search results. A 2011 study of tens of millions of consumer-generated search engine results pages revealed that “when it comes to clicks on those organic listings, 53 percent go to the top result. The second sees 15 percent of the action, the third 9 percent, the fourth 6 percent, dwindling all the way down to 4 percent to round out the top 5.”³⁶ (See Figure 5).

Share of Listing Types and Share of Clicks



Figure 5: 53% of Organic Search Clicks Go to First Link Source: <http://searchenginewatch.com/>³⁷

Studies have shown that approximately 70% of users' attention is focused on the top two Google Search results, enabling top-ranking sites to attract almost all search traffic.³⁸ This creates a vicious anticompetitive cycle for Google's rivals: a loss of eyeballs (and thus clicks) deprives competitors of revenues, which means less investment in existing and new services and an eventual loss of innovation. Google Search rankings are also misleading, since they do not present consumers with what would objectively be the most relevant search result. Google's manipulation of search rankings also denies consumers their right to choose, by depriving competing services of the traffic and revenues they need to be able to offer alternative services to Google.

As noted above, some listings companies have endeavoured to neutralise the harmful discriminatory impact of Universal Search by concluding individual agreements with Google. However, despite these agreements, Google continues to reserve the top rankings for its own services, while reaping the benefits it has negotiated for its own mapping services under these agreements.

In fact, Universal Search is not the only way in which Google has discriminated against rivals, depriving them of important traffic, revenues and stifling incentives to innovate. In its complaint, Streetmap described how Google discriminated against Streetmap by only partially crawling its sitemap (despite having a Google relevancy score of 7): by February 2012 a mere 5% of Streetmap's website's content had been indexed at which rate it would take 20 years for Google to index all of Streetmap's content. According to Streetmap, since Google's Webmaster Guidelines provide no details as to why this is, the only reasonable explanation is that Google's algorithm discriminates against actual or potential competitors.

Predatory Pricing & Cross-Subsidisation

For consumers, most online mapping services are free to surf and to use, something which is accepted market practice. These sites are normally funded by advertising and by the royalties received from third parties in return for the right to integrate the map into third party websites, to show for example, an office location or public transport network.

The economic model for Google Maps is that it is free to users, with its internal and external costs (such as buying mapping data) being funded through its profits in other areas, (for example its dominant search advertising business). It is this part of the model which has been the subject of complaints filed with the European Commission by Streetmap, Hot Maps and Euro-Cities and of the judgment of the Commercial Tribunal of Paris in the [Bottin Carto](#) case. Google's competitors have complained that Google has priced them out of the market, by offering its Google Maps licences and Google Maps API service for free. Significantly, once Google achieved dominance in online mapping, it introduced charges for its Google Maps API service – a textbook example of recoupment following a period of predation.

From 2005 to 2009, Google offered its API service at no cost and provided Google Maps without advertising. It is reasonable to assume that Google could sustain this business model and maintain its place as an “active loss leader” by cross-subsidising these services from profits made in markets where it has long been dominant, such as online advertising. In contrast, Google's competitors in the mapping sector had no choice but to monetise their services, either through online advertising or by charging businesses for the use of their API-equivalent services.

By providing a service without advertisements to users and free-of-charge to businesses, Google exponentially boosted its user and business base, its services appearing more attractive than competing offerings. However, in as early as 2008, Google is reported to have begun in some countries to insert search advertising in Google Maps³⁹ and in July 2011, Google introduced AdWords Express, an instrument for businesses to advertise online by combining AdWords and Google Maps.⁴⁰ In October 2011, Google began charging some businesses to use its previously free API service, introducing usage limitations and fees in order to ensure, in its words, that “*the service remains viable*.”⁴¹ Google's initial usage limits were set at 25,000 map loads per day for 90 days for traditional maps and 2,500 for personalised maps. Developers surpassing these thresholds were forced to pay Google USD 4 - 10 per 1000 loads – an amount which is perceived by the mapping industry as the going-market rate for API usage.⁴²

Google's initial strategy was twofold: first, Google Maps and its API service were provided for free, building Google's user and business base, its high rankings in search results guaranteed by Universal Search; second, after having severely reduced competition, Google recouped its costs by introducing advertising in some countries and charging for certain levels of API service usage. These conclusions are supported by the finding of the French Commercial Tribunal in the *Bottin Carto* case, where it was held that in providing Google Maps API for free, Google had not allowed for the recoupment of the production costs involved in offering its services, including, for example, product development and distribution, as well as its payments to acquire rights for geographic data. This *modus operandi* according to the French Commercial Tribunal aimed to “*lead [...] all competitors on the market [...] being eliminated*”, and was “*evidently part of a wider exclusionary strategy*.”⁴³

Since the Bottin judgement (which is under appeal), Google has yet again made amendments to its API usage restrictions and fees, pricing below cost with the aim of excluding competitors from the marketplace. Since June 2012, Google now charges between 50c and USD 1 per 1000 loads – up to 8 times less than its previous tariff.⁴⁴ These tariffs are priced well below the market average.

These practices have been thoroughly examined by the European Commission in similar sectors and it has paid special attention to predatory conduct of monopolies through cross-subsidisation of activities in adjacent markets.⁴⁵ According to the Commission's Guidance Paper on Article 102:

"While the dominant undertaking does not need to engage in predatory conduct to protect its dominant position in the market protected by legal monopoly, it may use the profits gained in the monopoly market to cross-subsidize its activities in another market and thereby threaten to eliminate effective competition in that other market."⁴⁶

Google's API pricing strategy is a classic example of Google's exploitation of its deep pockets to gain an unfair advantage over competitors. This is by no means the only example: as described in ICOMP's recent paper "[Google's Monopolization of Mobile](#)", Google has subsidised its Android operating system and Google Analytics service in a similar way and with similar results.

Breaching Licencing Terms

Cartographic data is a key input to build and develop online maps. In Europe, cartographic data has been historically generated by governmental bodies, and is normally licensed by state-owned entities as copyright protected content.⁴⁷ These licences are subject to EU rules regarding the re-use of public sector information, which oblige public entities to licence their copyright-protected rights on Fair, Reasonable and Non-Discriminatory terms (FRAND), as well as to facilitate "*re-use and [not] to restrict competition*."⁴⁸ Based on these obligations, governmental bodies and state-owned cartographic companies must normally require their licensees to grant additional licences on the basis of the original licence.⁴⁹

A number of online mapping companies believe that Google has not been respecting these FRAND licensing terms and thereby has obtained an unfair competitive advantage over companies which have adhered to such terms. It is not clear whether Google has been in breach of its licence agreements or whether public bodies have been offering the Internet giant more favourable terms than competitors.⁵⁰ But what is evident, according to competing mapping sites, is that Google exploited its market power to dictate the terms on which it would licence and use public data.

Some of Google's competitors in Germany believe that Google Maps has been able to licence aerial data at a very low price from the state entity, the German Federal Office for Cartography & Geodesy (the Federal Office).⁵¹ The Berlin-based mapping company, Euro-Cities was informed by the Federal Office that it would be required to pay EUR 15,552 in licence fees for each third party website embedding Euro-Cities' map on its site. According to an article published in *Wirtschaftswoche*, with approximately 50,000 sites in Germany embedding Google Maps, on the basis of this quote, Google should be paying the German state annual revenues of approximately EUR 800 million. Industry reports, by contrast, suggest that the actual fee paid by Google in total is merely around EUR 30,000 per annum.⁵²

Indeed, according to one competitor, the German Federal Office permitted Google to use public body data in a way in which competitors simply could not. Shortly before Google signed a deal with the Federal Office in September 2011, the Federal Office prohibited the Norwegian spatial data company, Blom, from passing on data through an API. According to a manager at Blom: "*The Federal Office has apparently not negotiated with Google such a third-party agreement as with us*".⁵³

Effects of Google's Anticompetitive Conduct

As described above, Google has engaged in a number of exclusionary and exploitative practices, which together have enabled it to increase exponentially its user and customer base in online mapping and listings services, at the expense of other competing services. Online mapping services are subject, to a certain degree, to the scale benefits inherent to search and search advertising platforms.⁵⁴ Google's mapping experience is a two-sided platform with two distinct groups: businesses and users. For this reason, where there is an increase in use by one customer group, the other customer group finds the platform all the more attractive. By way of illustration, more businesses embedding points of sale in Google Maps attracts more users, and *vice versa*. In fact, in attracting more users, particularly on smartphones, Google is able to obtain important mapping data to create and improve its services (see section below "*The Future of Mapping & Listings – Going Mobile*").

Google has an effective monopoly in search and online advertising (especially in Europe), and has leveraged this position into the mapping segment, where it rapidly gained market share. Having acquired an unassailable advantage in these core areas through illegal means, Google is signing up local-business customers, which it began targeting in as early as 2008.⁵⁵ As reported in the Wall Street Journal in June 2012: "*Google is preparing to launch its largest-ever assault on the roughly \$20 billion market for local business advertising.*"⁵⁶ Today, Google offers Google+ Local and Google Business Builder (a service which bundles a number of services provided by Google, including Google Maps and Google AdWords, as well as providing marketing assistance) in order to enable businesses to optimise their presence on Google.⁵⁷

As explained above, this provides businesses with a combination of Google products and services, some of which have been acquired by Google in order to further develop the "business" aspect of Google Maps (e.g., for example, Punchd, TalkBin and Wildfire). Google has been able to fund these acquisitions through its monopoly search advertising profits.



Figure 6: Google's ambitious plans to take on local-advertising

Source: <http://online.wsj.com/article/SB10001424052702304821304577443371490403652.html>

The above diagram demonstrates how Google is building its local business offerings. Given that Google captures over 90% of search engine traffic in Europe, small businesses recognise the need to improve their visibility on the Google platform and in particular on Google Maps and Google+ Local. In this way, Google exploits its scale to become an unavoidable partner for businesses seeking online and offline visibility. In turn, this increases Google's own revenues, since, as Google itself put it, "*these redesigned formats increased click-through-rates [and bids] by 100%.*"⁵⁸

The Future of Mapping & Listings – Going Mobile

Google's business strategy depicted in Figure 6 above is not limited to the desktop. Google has openly acknowledged the importance of local search on mobile. According to Google's geospatial technologist, Ed Parsons, the increasing mobility of both individuals and their access to geospatial applications, such as mobile phones, means *"that information that is close to us is going to be more important than information that is further away"*.⁵⁹

Mobile is expanding rapidly and it is becoming clear that Google will follow a similar anticompetitive strategy, leveraging its dominant position from desktop search and online mapping into mobile. Google's anticompetitive conduct coupled with its dominant mobile operating system, Android, paves the way for Google to discriminate in favour of its mobile services to the expense of competitors. In the words of Noah Elkin, eMarketer's principal analyst: *"Google has translated its dominance of overall online and desktop search advertising into dominance in mobile advertising at a rapid pace."*⁶⁰

With more and more consumers on the go, mapping and listings sites are becoming even more valuable to smartphone and tablet users. From the three months ending May 2012, 48.8% of mobile users in France, Germany, Italy, Spain and the UK used a smartphone.⁶¹ In June 2012, more than 20 million people in France went online via their mobile phones (more than one out of three people in the country) and in June 2011 there were 24,049,000 unique visitors to mapping sites in France.⁶²

In the EU5 (UK, Germany, Spain, France and Italy) mobile mapping usage increased by 68% from February 2009 to February 2011.⁶³ With smartphone users growing rapidly in numbers, mobile mapping and listings have shown great growth potential: mobile ads associated with maps or locations are estimated to account for around 25% of the predicted USD 2.5 billion spent on mobile ads in 2012 in the US.⁶⁴ It is estimated that Google succeeded in capturing 90% of these mobile ad revenues in 2011.⁶⁵ This comes as no surprise given that Google has an effective monopoly in mobile Internet search: Google had 97% of worldwide mobile searches in 2011.⁶⁶ Moreover, this figure is likely to remain at extremely high levels in the coming years since Google is the default search engine for a large number of handsets.⁶⁷ This is entrenched by the fact that Google's mobile search tool preferentially lists its online mapping services at the top of results and its Google Maps app is more often than not bundled into handsets operating on Android.⁶⁸

Google's prior relationship with Apple is informative of Google's anticompetitive strategy on mobile. In 2006, Google and Apple struck a "ground-breaking" deal for the automatic pre-loading of the Google Maps application on the 2007 iPhone. Under the terms of the agreement, when an iPhone user opened Google's mapping app, Apple would send Google data about the position of a particular phone. Google was reportedly aggressively exploiting this agreement to garner data from the Google Maps application, quite possibly contrary to applicable privacy laws.⁶⁹

Google has long recognised the value of location information and Google's much-criticised collection of information from unsecured wireless networks demonstrates Google's relentless quest for data. In addition to Google's collection of user data from its Street View mapping vehicles, in breach of privacy laws around the world (the "Spy-Fi" scandal),⁷⁰ there is at least one other case showing the lengths Google will go to in order to acquire Wi-Fi location data.

Skyhook Wireless Inc., a provider of smartphone positioning technology called XPS, has accused Google of ousting Skyhook from the local positioning technology business by disrupting its commercial relationships with handset manufacturers, Samsung and Motorola. This case was described in more detail in ICOMP's paper, [*"Google under the Antitrust Microscope"*](#). What is instructive about Skyhook's case is that when the US Massachusetts Superior Court denied Google's motion to dismiss Skyhook's case last year, a number of Google internal emails were disclosed. Some of these emails show that

Google's main concern about OEMs switching to Skyhook was that Google would lose out on location data.⁷¹

On the day that Skyhook announced its agreement with Motorola for upcoming Android devices, Google's Zhengrong Ji sent an email saying: *"it's sad to see first Apple, now Motorola moving away from us, which means less [data] collection"* for Google. In the same email thread, Google's Steve Lee described OEMs switching to Skyhook as *"awful for Google because it will cut off our ability to continue collecting data"* for the Google WiFi location database. In an email response to Larry Page, Lee summed up Google's needs for *"WiFi data collection in order to maintain and improve our WiFi location service (especially having Street View WiFi data collection discontinued)"*.⁷²

The Skyhook case is a prime example of how Google has exploited its dominant Android platform to gain scale in mobile maps, using *"compatibility as a club to make [OEMs] do what we want."*⁷³ As described in ICOMP's recent paper *"Google's Monopolization of Mobile"*, since 2007 Google has been systematically tightening its grip on Android to block companies from using competing services. Indeed, Google's dominant Android operating system has enabled it to leverage its Google Maps app, to the exclusion of competing mapping applications. Android is now installed as the default operating system in approximately 50-60% of smartphones sold in the largest EU Member States⁷⁴ and Google Maps is almost always automatically preloaded into handsets run on Android.⁷⁵ In 2011, Google Maps for mobile surpassed the 200 million installs mark, with over 40% of Google Maps usage taking place on mobile phones.⁷⁶

In this way, it is becoming more and more difficult for other online mapping services to compete with Google on mobile, since (unlike Google) competitors lack the necessary data means and information to build online mapping offerings that present a viable alternative to Google Maps. For example, in August 2012, Apple launched its Apple Maps application for its iOS 6 Update, dropping the Google Maps app from the latest version of its iPhone. Although many of the reasons for Apple's move are not public, it demonstrates at least two things: it shows how strategic mapping services have become on mobile; and it illustrates how difficult it is for anyone to compete in markets on which Google has decided to focus, even if they are as sophisticated and as resource-rich as Apple. In the words of Molly McHugh of Digital Trends, *"it's fun to talk about the death of Google Maps and the rise of new options – but it's unrealistic"*.⁷⁷

Conclusion

Maps throughout history have reflected a particular cultural view of our world at a given point in time.⁷⁸ Online maps bring a new meaning to cartography – they have become an application platform where businesses trade actionable information and where consumers search for directions and access local information.⁷⁹ With the growth of mobile and the rising importance of local search, online mapping and listings sites have the potential to offer exciting opportunities for European businesses, in particular small, local businesses, and in turn, consumers. Such sites present a new and efficient medium for entrepreneurs to be visible and to reach Internet users. For this reason their potential contribution to Europe's economy must not be overlooked. In the words of the President of the European Commission, Barroso: *"we need to ... [create] an environment that encourages entrepreneurship and supports small businesses"*.⁸⁰ With this in mind, European regulators should do everything in their power to prevent Google from depriving online mapping and listings sites of the ability to unlock their capacity for growth.

Google's anticompetitive strategy is wiping out competition, hampering innovation and denying consumers the right to choose. According to Hot Maps' Michael Weber, *"Universal Search" pushed us out of consumers' sight and Google's below-cost pricing took away our business customers."*

It is vital that regulators work fast to reinstate mapping plurality and avert the steady disappearance of Google's competitors in this sector. Google must be forced to operate a fair business model. One possible solution would be to place competing online maps and listings sites on an equal footing with Google, by giving them access to essential location data on no less favourable terms than those obtained by Google. However, this would only be a partial solution and inadequate without other measures to deal with ranking discrimination and cross-subsidisation. Without regulatory intervention, Google Maps will remain unchallenged, Google will continue to leverage its search and search advertising monopolies and European consumers will find themselves with no choice other than Google Maps. As Professor Brotton eloquently put it:

"We may...be the last generation to know what it means to see mapmaking generated by a range of individuals, states and organisations. We are on the brink of a new geography, but it is one that risks being driven as never before, by a single imperative: the accumulation of financial profits through the monopolization of quantifiable information."

- A History of the World in Twelve Maps

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