



51Degrees.mobi Limited
9 Greyfriars Rd
Reading
Berkshire
RG1 1NU
United Kingdom

12th February 2020

Online Platforms Market Study
Competition and Markets Authority
25 Cabot Square
London
E14 4QZ

Dear Sir / Madam,

We write in response to your interim report of 18th December 2019 into online platforms and digital publishing, as published online at the following web address: <https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study>.

The risk is that an overwhelmingly dominant web browser, or any other piece of technology, through which access to the web is mediated, places disproportionate power in the hands of the organisation that creates or controls that technology, enabling such an organisation to deliberately or otherwise disadvantage less dominant organisations that depend upon it. By way of example, in recent memory Microsoft's strangle hold of the web browser market resulted in the stagnation of open access to and the evolution of the web. We fear that Google's dominance of the Chromium web browser, which is used by over 60% of web traffic in the UK, will have similar adverse consequences to citizens and the companies within the eco system which depend on open and equal web browsers.

In the following we evidence two specific examples where we feel this dominance has resulted in discrimination. We also highlight areas associated with governance and change which we fear will lead to adverse outcomes.

About Us

Under the 51Degrees brand we provide services to enable web site owners, telecoms operators and application publishers to understand the different device models, operating systems, applications and web browsers that access digital services. We do not track individuals or their devices. Our customers are international and include [REDACTED] among thousands of others. These businesses use the information we provide to analyse, optimise and improve their services. We are a small but significant "cog" in the global digital publishing and advertising eco system. During financial year 2018/19 we generated revenues of [REDACTED] and employed an average of [REDACTED]. We consider ourselves a typical UK 'scale-up' contributing to UK technology exports.

Summary

Chromium is the world's most popular web browser and is the primary technology used by consumers on their devices to access digital services and receive digital advertising. Chromium is not

the same as Google's Chrome web browser. Similarly, web browsers produced by other vendors including Microsoft and Samsung are built on Chromium. All web browsers built on Chromium share circa 90% of more of their source code.

Only Firefox competes with Chromium. Only Firefox can similarly be deployed across all operating systems including Windows, Linux and Android. Apple's Safari browser is restricted to Apple products. Apple require all web browsers running on iOS and Mac OS to use Safari for features provided by Chromium. As such Firefox and Chrome, among others, are actually using Safari when installed on iOS. Apple, whilst a significant market player, represents approximately 30% of all UK web traffic whereas Chromium-based browsers represent over 60%.

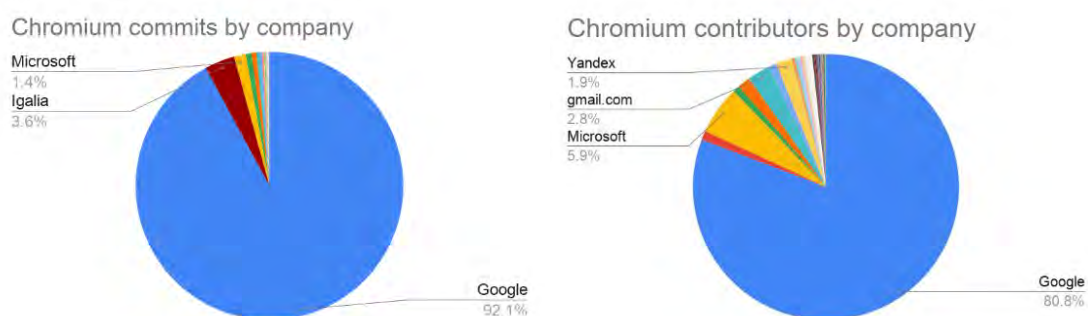
The barrier to entry for a new browser vendor has become so high that during the period of the CMA's study Microsoft adopted Chromium, thereby abandoning their own web browser technology. Google's role in the governance and control of Chromium alongside the impact this has on consumers and all competition needs to be explored in the second stage of the study. The role Chromium plays in the delivery of online services and advertising is largely absent from the first stage. Google's control of Chromium is analogous to Openreach providing BT unique features and services to the detriment of BT's competitors.

As such we do not agree with your questions 1, 10, 15, 18 at section 9.1 of the interim report. In this letter we will explain the intrinsic link between the Chromium web browser and digital services, Google's governance role, how this role has been used to benefit Google in at least two instances during the CMA's study, the biases associated with human factors and the questions the CMA must ask during the second stage of the study to adequately fulfil its objectives.

Chromium

Chromium is everywhere. Beyond classic web browsers including Google Chrome, Microsoft Edge, or Samsung Browser, Chromium underpins many applications and advertising. For example, a web page or advert displayed withing the Facebook application is displayed using Chromium. An advert tapped within an Android application appears within a Chromium controlled experience.

Chromium is an open source project stewarded by Google. The source code is available online for anyone to inspect at <https://source.chromium.org>. Google and its employees are the dominate contributor as shown in the following pie charts provided by Google.



Source : <https://blog.chromium.org/2019/11/intent-to-explain-demystifying-blink.html>

Inequality

Chromium includes features that provide Google services with privileged information that is made unavailable to all other competitors.

When a Chromium-based web browser accesses a Google service additional information not available to any other service is transmitted to Google by Chromium. This information enables Google, and only Google, to understand the state of the device and installation of the web browser. Google wish to know this information so that they can enhance their services and address performance or other issues more rapidly than would otherwise be possible. The information could also be used to track users without their knowledge, although Google deny this is a practice that they engage in. The name associated with this Google privileged data is X-Client-Data.

As Chromium is open source it is possible to observe the computer code used to distinguish Google services within Chromium.

```
300 // Some domains don't have international TLD extensions, so testing for them
301 // is very straightforward.
302 static const char* kSuffixesToSetHeadersFor[] = {
303     ".android.com",
304     ".doubleclick.com",
305     ".doubleclick.net",
306     ".ggpht.com",
307     ".googleadservices.com",
308     ".googleapis.com",
309     ".google syndication.com",
310     ".googleusercontent.com",
311     ".googlevideo.com",
312     ".gstatic.com",
313     ".litepages.googlezip.net",
314     ".ytimg.com",
315 };
```

Source :

https://source.chromium.org/chromium/chromium/src/+master:components/google/core/common/google_util.cc;l=293

The above is a snippet of source code extracted from Chromium on 7th February 2020. A lay person can recognise the domain names listed at lines 303 to 314. These domains relate to advertising services, APIs and static content services among others. Other lines of computer code - not shown for brevity - also identify You Tube and other Google services. No other company has the option or ability to receive this special information to benefit the development of their services. The mere fact these lines of code exist at all is hard evidence that Google are seeking to differentiate their own services.

In a parallel development Google are seeking to restrict a lesser set of information – termed User-Agent - that has been provided to all web services for over 30 years. Google are seeking to remove the information that enables a web site owner to understand the web browser, operating system and device model at the moment the device accesses a web site. They have presented no information to show that such information in practice is a threat to privacy or to otherwise justify their proposal. Their proposed replacement does not perform the same function, is incomplete and poorly thought through. See W3C Technical Architecture Group (TAG) issue 476 at <https://github.com/w3ctag/design-reviews/issues/467>. If implemented this change risks breaking competitors' services when accessed via Chromium-based web browsers. If other browser vendors, notably Firefox and Apple were to follow Chromium's lead they would remain broken for all. It will degrade all fraud, marketing, technology, publishing and advertising businesses and solutions among others to some extent.

As identified in the CMA study, Google are one of the largest benefactors of ‘logged in first party usage data’ in part due to their dominance of the web browser and essential services. When combined with X-Client-Data and the proposed restrictions to the User-Agent, Google will operate with a truly unique and unparalleled understanding of all aspects of the web. It would become practically and technically impossible for any other organisation to compete with Google. Google’s control over Chromium, the de-facto means of consuming all digital services and advertising, is germane to the second stage of the CMA’s study.

Governance

The source code snippet shown previously is from a file created in 2008. Chromium consists of tens of thousands of such files and millions of lines of source code. Whilst the source code is available for public inspection and freely licenced, it is impractical for any other company or individual to review and analyse all the changes being made. Google effectively “mark their own homework” due to their scale. This includes deciding if a change would skew Chromium to Google’s advantage.

The only viable competing web browser to Chromium is Firefox which is stewarded by the not-for-profit Mozilla Foundation. Firefox lack the resources to “keep up” with the pace of change that Google operate at. As such, those seeking to use the latest web features are forced to use Chromium, and therefore embrace Google’s solution. If Google are left unchecked Firefox will quickly become obsolete without significantly more funding and resources.

Google also have the autonomy to decide when to release information about just some of the changes they wish to make. Engineering announcements so far in 2020 have been incomplete and poorly thought through without the established norms associated with public consultation and debate. The uncertainty that is generated materially impacts Google’s competitors and other web businesses. As one example; these announcements resulted in a 15.9% drop in France-based marketing company Criteo.



Source : <https://www.cnbc.com/2020/01/14/criteo-stock-crashes-after-google-announces-chrome-cookie-change.html>

Such lack of clarity and confusion is causing many businesses in sectors such as technology, digital marketing, on-line publishing and advertising huge difficulties. Google are forewarned, have the largest global engineering team, and as sole decision maker face no such difficulties.

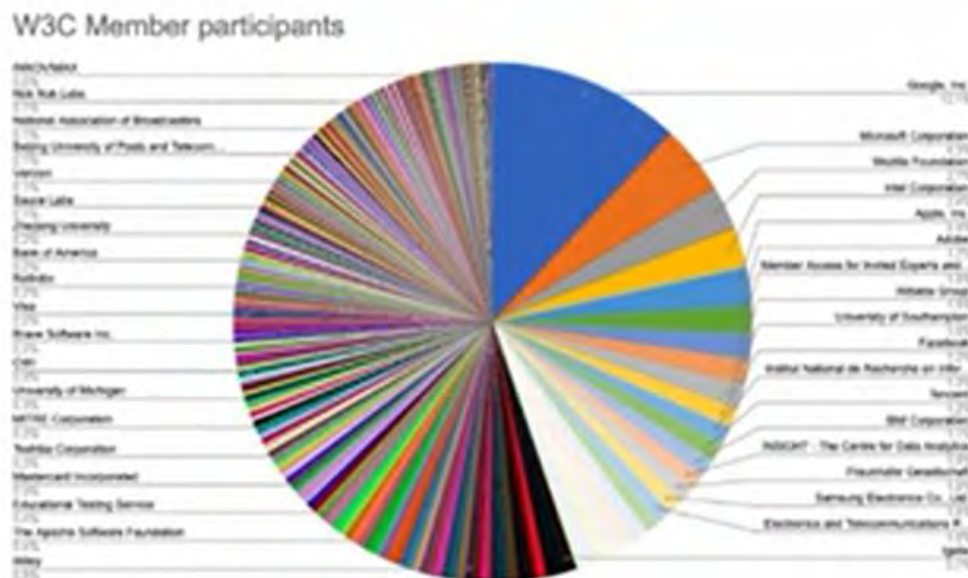
The CMA should consider recommending that an independent third party (perhaps the W3C or UN Internet Governance Forum) be assigned responsibility for assessing all changes to Chromium, and for establishing a consultative and transparent roadmap for change published years in advance to avoid “surprises”.

Human Factors

Google are members of many trade and governance bodies, such as the Internet Advertising Bureau (IAB), the Association of Online Publishers (AOP) and W3C. Google, via direct financial contribution in the form of membership fees, or via the contribution of Google employees, dominate all these organisations.

Furthermore, considering trade bodies, Google are often among the biggest financial contributors to such organisations, and it is open to question as to whether they bear disproportionate influence as a result.

The W3C consists of specialists employed by many large organisations selected for their engineering or other specialist talent. Only very large organisations can afford to have highly paid engineers and specialists in roles that don’t relate directly to product development or revenue generating activity. Such individuals need to spend considerable time understanding the design decisions under consideration which will have a material impact on the web and are the subjects of the CMA’s study. Google contribute over three times as many individuals as the next largest contributor (Microsoft) to the W3C. Smaller organisations simply cannot afford to be engaged.



Source : https://youtu.be/y3EZx_b-7tk?t=307

The calibre of engineering skill and time required prohibits the vast majority of web professionals from engaging in the debate. The media have adopted a tendency to report on rather than challenge Google’s decisions and announcements. As such, the vast majority of those individuals and organisations impacted by decisions made by Google have no option but to react and no effective practical route to challenge.

Such human factors have a bearing on the governance in practice of Chromium in particular and the web in general. The CMA should investigate the effect that human factors are having on practical

governance, and if change is needed, they should make recommendations to both the W3C and to the UN Internet Governance Forum to ensure no single player, either through financial strength or weight of employee numbers, stifles effective debate and consultation.

Conclusion

The web browser, and particularly Chromium, are the technologies which underpin and shape the delivery of digital services and advertising. Any study into markets, innovation and consumer protection will be incomplete without considering the role of Chromium. As such we have the following responses to the four questions highlighted at the start of this letter.

- 1. Do you agree with our descriptions of general search services and social media service, as set out in Chapters 2 and 3?*

These descriptions do not acknowledge the role of the web browser and how control over the web browser can be used to skew the results of these services.

- 10. Have we identified the appropriate range of potential interventions to address the sources of market power for Google and Facebook?*

Chromium is a significant and unique source of market power for Google. Chromium's absence in the interim report must be addressed during the second stage.

When combined with Google's access to logged in first party data Chromium provides a further unique source of market power. The CMA should consider separating the control of logged in first party data from any single organisation.

- 15. Do you agree with our assessment of the potential candidates for a market investigation, and what are your views on the merits of each?*

A market investigation must include Google's role in the governance of the web via the W3C and the power it exerts via de-facto control over the implementation of these standards.

- 18. Do you agree we have identified the right areas for further work in the second half of the study (set out below), and are there any significant gaps?*

Further work must involve the role of the web browser and Chromium to fully assess the objectives of the study.

We understand some of the facts presented in this letter are, out of necessity, technical in nature. We are prepared to assist the CMA in their understanding of the significant impact the various technologies play in the subjects of the study.

A separate confidential redacted version of this letter is provided for publication. The response should be published under "51Degrees", our company trading name.

Yours sincerely,

James Rosewell – CEO 51Degrees – for self and 51Degrees