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Competition and Markets Authority
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For the attention of:
browsersandcloud@cma.gov.uk

By email only

[redacted]
16th July 2024

Dear Sirs,

Re: Mobile browsers and cloud gaming – Working Paper 1 – Comment

1. As you know, we represent Movement for an Open Web ("MOW"). We are concerned that recent evidence disclosed in the US proceedings against Google may have been under appreciated. It changes the context, and Apple and Google's joint incentives. This change of context is important for assessing competition issues. One specific concern that we highlight below is that certain statements may veer towards contradicting previous CMA findings and the position of the ICO concerning privacy misuse with relation to the browser in the parallel CMA Privacy Sandbox proceedings. These are perhaps unintended and need to be addressed. We reference each working paper where relevant.

The nature of competition (WP1 Section 2, p.8-30) understates the importance of information in a market economy and its criticality in a digital market economy. As a result, the CMA overlooks the mechanism of browser abuse that has been taking place for some time and then under appreciates the role of the browser in blocking online competition.

2. The dynamic process of competition uncovers information about consumer demands. Competition policy has supported open competitive markets that increase innovation arising from the process of understanding information about consumer needs and thereby enabling rivals to outcompete each other in their search for different solutions. Different competitors use information of all types to develop better products. Many methods for increased efficiency in production, and solutions for the quality of online interactions, depend on information about what people want, need or desire.

3. The starting point of information being the lifeblood of the economy should not be controversial; it is, however, essential to appreciate that the normal state of all competitive markets is one where they are information dependent and consumer demand is only met if suppliers understand what they want.

4. Where the economy generally is data dependent, the digital economy is more so, which has become channelled through end use of devices. Mobile browsers and mobile devices are the province of Google and Apple. Interactions with their software products and physical devices provide what Google calls "the Magic of Google"[1] from which customer needs and their purchasing intent can be understood via users' interaction. The information about those needs is vital for all online businesses but is presently being controlled by Apple and Google.

5. Inadvertently disclosed via an expert witness,[2] and in documents finally disclosed in May 2024 in USA v Google (Search)[3] data from iOS devices is subject to a joint revenue sharing deal. That agreement has sometimes been mischaracterised as a default agreement. It is not the fact that Google is set as a default on iOS devices that makes such a material difference to competition; it is that Apple receives 36%[4] of the very substantial revenue from Google's search ads that is significant. As a revenue sharing agreement, Apple is sharing in the success or failure of the search ads business. It is a joint venture partner under which its financial incentive is to increase the income from sales of search ads generated by Google from iOS devices. Since the amount of the payments are so large ($20 bn), which is almost all pure profit, Apple's organisation and behaviour is significantly impacted. The extent can be understood when it is appreciated that Apple's profits from all of its Mac range of computers do not amount to much more than the Google payments[5].

6. We provided the CMA with a submission on the coordination between Apple and Google in August 2021, which we resubmit in the attached annex 1. When read in the context of the 36% revenue sharing agreement, Annex 1 provides examples of how much Apple's behaviour is affected. It is highly likely that further investigation would reveal further examples of anticompetitive collaboration.

The dynamics of online competition are not as the CMA suggests. The free offering of all online websites is funded by advertising. Advertising requires the use of short term storage files called "Cookies".

7. Third Party Cookies (TPCs) are small storage files. They are a widely deployed and vital part of online publishing. They enable ads to be matched with publishers' available inventory. As accepted by the CMA in its seminal 2020 Report, they are essential to programmatic exchanges which match demand and supply through cookie syncing[6] via ad exchanges. This brings higher revenue for publishers, by allowing programmatic exchanges to source the highest value possible for them based on the data available within milliseconds.

[1] See USA v Google (Search) [2020] Trial Exhibit "Google is magical" at https://www.justice.gov/d9/2023-09/416665.pdf
[2] https://fortune.com/2023/11/14/google-lawyer-cringes-in-court-antitrust-john-schmidtlein-apple-36-percent-search-advertising/?ref=biztoc.com
[3] See USA v Google (Search) [2020] unredacted testimonial document uploaded on 2 May 2024, slide 58 re. Google's Information Services Agreement with Apple at https://www.justice.gov/d9/2024-05/421631.pdf
[4] See USA v Google (Search) [2020] transcript of hearing on 13 November 2023, page 111 at https://thecapitolforum.com/wp-content/uploads/2023/11/U.S A.-et-al-v.-Google-LLC-Nov-13-2023-Bench-Trial-Day-39-Morn-Sess-Transcript.pdf
[5] See annex 1 of this letter regarding the collaboration between Apple and Google as submitted ahead of the CMA's investigation.
[6] See CMA Digital advertising market study, appendix H and in particular, para. 97 at https://assets.publishing.service.gov.uk/media/5dfa172240f0b6217b108351/Appendix_H2.pdf

8. We know that Apple blocks Google's advertising competitors' access to all data from its devices.[7] It is paid over $20bn a year for allowing Google search ads ***exclusive*** access to data from users of iOS devices. That is the important commercial context that reveals Apple's motivation for blocking all data from iOS devices being provided to Google's advertising competitors.

9. The more data that Google has from users of iOS devices, the higher the value of its ads, conversely the less data that is available to Google's competitors, the lower the value of Google's ads. Apple's so called privacy rationale is nothing of the sort- it is a smokescreen for increasing revenue from its advertising deal with Google. We commend the DOJ's statement of Apple's true position:

   16. Apple wraps itself in a cloak of privacy, security, and consumer preferences to justify its anticompetitive conduct. Indeed, it spends billions on marketing and branding to promote the self-serving premise that only Apple can safeguard consumers' privacy and security interests. Apple selectively compromises privacy and security interests when doing so is in Apple's own financial interest—such as degrading the security of text messages, offering governments and certain companies the chance to access more private and secure versions of app stores, or accepting billions of dollars each year for choosing Google as its default search engine when more private options are available. In the end, Apple deploys privacy and security justifications as an elastic shield that can stretch or contract to serve Apple's financial and business interests."

10. As a matter of fact, Apple introduced its Intelligent Tracking Prevention (ITP) and App Tracking Transparency (ATT) changes to block third party use of data from 2017 and which are ongoing.

Market Definition Requires Supply Side findings to be effective (WP1 Section 3).

11. The CMA has taken an approach which starts, in a traditional way in Section 3.5, which looks at technical features and functions and states: "*Our starting point for assessing market definition is the set of products and services identified in the terms of reference for this investigation, namely the supply of mobile browsers and mobile browser engines in the United Kingdom".*

12. By contrast with the EU's Digital Markest Act, Regulation 1295 of 2022 (DMA) proceeds from a different perspective, informed as it is by an appreciation of the underlying economics of platforms. It recites the importance of online platforms to the digital economy and then states:

    (2)At the same time, among those digital services, core platform services feature a number of characteristics that can be exploited by the undertakings providing them. An example of such characteristics of core platform services is extreme scale economies, which often result from nearly zero marginal costs to add business users or end users. Other such characteristics of core platform services are very strong network effects, an ability to connect many business

[7] See Apple's Intelligent Tracking Prevention (ITP). The CMA explores this in detail in https://assets.publishing.service.gov.uk/media/62a229c2d3bf7f036750b0d7/Appendix_J_-_Apple_s_and_Google_s_privacy_changes__eg_ATT__ITP_etc__-_FINAL_.pdf

users with many end users through the multisidedness of these services, a significant degree of dependence of both business users and end users, lock-in effects, a lack of multi-homing for the same purpose by end users, vertical integration, and data driven-advantages. All these characteristics, combined with unfair practices by undertakings providing the core platform services, can have the effect of substantially undermining the contestability of the core platform services, as well as impacting the fairness of the commercial relationship between undertakings providing such services and their business users and end users. In practice, this leads to rapid and potentially far-reaching decreases in business users' and end users' choice, and therefore can confer on the provider of those services the position of a so-called gatekeeper

13. The DMA effectively recognises that platform economics means markets are defined by the supply side. This is different from the traditional approach which starts with the product in hand and looks at features functions and prices from the perspective of the end user. The misconception is to think that digital markets are defined by the demand side.

14. It has been recognised for many years that demand side definition breaks down where the businesses concerned are very high fixed costs and have the benefit of economies of scale, scope and externalities as we have with the technology platforms, and as recognised by the DMA. Any software house (such as Microsoft or Google or Apple) that controls an operating system or browser can define a function and that is a product.

15. These tech platform markets are defined by the supply side[8]. They also have a lock on the market because they are the route to market for apps and operate as distributors with billions of users captured within their footprints.

16. The issue of the underlying economics of tech and telecom platforms has been known for many years and is the reason we regulate the telecoms part of the technology stack. The issue is whether a supplier should be included in the relevant market. This is currently addressed in the new market definition guidelines under "Entry". Where a supplier has already committed substantial sunk costs to entering a market, and the addition of only limited additional costs or features is needed to be economically viable on a large scale, the supplier should be included in the relevant market. Timeliness and likelihood and sufficiency of entry has been an issue for market definition for many years. Older guidelines[9] address the issue with clear examples of committed and uncommitted entrants and assess the ratio of costs that are already committed and then the additional costs needed to provide a product or service. The example used of product substitution that is clear is the one that relates to the "metal stamper"[10]. A metal stamper is a high fixed cost machine that stamps metal. The machine can be used to make tin hats or hubcaps or cups – just by changing the die. So, it has relatively high fixed cost and low marginal cost. What market is the metal stamper in? The hubcaps market, the tin hat market or the tin cup market? The answer, like tech platforms, is that it is in the market for metal stampers. Google, Apple, etc. are likewise in the market for technology platforms.

[8] See EUR-Lex - 52004XC0205(02) - EN - EUR-Lex (europa.eu) also EU Horizontal Merger guidelines cases (Case COMP/JV 55 - Hutchison/RCPM/ECT, point 119, and Commission Decision 1999/641/EC in Case COMP/M.1225 - Enso/Stora, OJ L 254, 29.9.1999, p. 9, point 97).FTC Horizontal Merger Guideline s 1996 section 9

[9] See footnote 16 of the US DOJ 1982 Merger Guidelines at https://www.justice.gov/archives/atr/1982-merger-guidelines

[10] See footnote 16 of the US DOJ 1982 Merger Guidelines at https://www.justice.gov/archives/atr/1982-merger-guidelines

17. They run technology platforms with very high barriers to entry arising from their ownership of multiple patents and software products on which they have spent billions of dollars. They hold so many patents and other knowhow and intellectual property that entry into the market for a platform has become virtually impossible; it is a game that only the super-rich platforms can enter. See for example the battle for mobile patents costing billions won by Apple and Microsoft[11] that led Google to buy Motorola for more billions[12]. In 2012, Larry Page at Google announced the closure of the Motorola deal and stated:

"*The phones in our pockets have become supercomputers that are changing the way we live. It's now possible to do things we used to think were magic, or only possible on Star Trek—like get directions right from where we are standing; watch a video on YouTube; or take a picture and share the moment instantly with friends*."[13]

18. Suffice it to say that following such significant sunk costs, Apple and Google's platforms can change the product that is produced at marginal cost very fast. That product can be offered to an end user including functionality in any part of the software in their platforms.

19. It is their software house **capacity** and **intellectual property** and **knowhow** that define the offerings. This allows the platforms to adopt and adapt quickly in a way that entrants cannot. This is critical to understanding how the market operates in practice. This is unaddressed by the CMA in its market definitions section save with reference to the percentage of code used by both mobile and desktop browser. Both Apple and Google estimate that over 50% of their code is used in both types of browsers, whilst Firefox suggests that it is 96%.

Browser features and functionality is optimised for supplier commercial benefit, the CMA's emerging thinking could be adapted to take more account of supply side factors.

20. Computer task efficiency depends on the efficiency of edge devices and overall cloud computing efficiency by task. This is thrown into sharp relief by *USA v Apple* [2024] where the DOJ is stating in terms that a $25 dollar Android device linked to the cloud has the exact same functionality of the $1500 Apple handset.[14] The high handset price is a consequence of Apple restricting interoperability both technically and through contractual restrictions. Absent such restrictions, the DOJ suggests that handset process would fall to less than $500 dollars. Consumers thus pay $1,000 dollars more per handset than they would absent restrictions.[15]

21. *USA v Apple* [2024] details that Apple puts in place two major impediments to competition:

    1) One is contractual restrictions in app store obligations for games and other apps store suppliers that prevent those apps from using to the open web (and distributed locations in the cloud).

[11] https://www.bbc.co.uk/news/business-13986877, https://www.theguardian.com/technology/2011/jul/01/nortel-patents-sold-apple-sony-microsoft
[12] https://www.bbc.co.uk/news/business-18164190
[13] https://blog.google/inside-google/company-announcements/weve-acquired-motorola-mobility/
[14] See DOJ v Apple Complaint (21 March 2024), para. 71
[15] See DOJ v Apple Complaint (21 March 2024), para. 128

2) The second is impediments to interoperability – between apps and devices such as smart watches and between apps and alternative payments systems.

22. It does not address the additional limits placed by Apple on browsers that the CMA has also identified in WP2, which prevent the use of different browser engines. The discussion about browser functionality is, unfortunately, thus quite limited as the references to market shares and the Verian Report do not address the features and functions of available browsers if the users were given a real choice, absent the restrictions.

23. Real choice would involve end users making a decision whilst considering information they do not have available to them, and it is not in the platform's interest to explain the following. For example, the Gecko engine is light on energy usage and does not fill the device with a browser that uses up battery life. The starting point for misunderstanding is demand side features and function analysis, considering products in terms of their ***current*** features and functions and prices in isolation from the way the vertically integrated form bans the use of alternatives. In its Verian report, the CMA considers features and functions of browsers and how much users see a difference between the browsers they are currently offered by the platforms. While the CMA knows that browser functions are impeded by Apple, it nevertheless refers, at 3.13 of WP1 to the fact that from a user's perspective, the features and functions of a browser are not appreciated. This is because the features are defined by Apple, not the market. The CMA's statement at 3.14 of WP1 comes close to the key point: "*From a supplier's perspective, there are similarities in the competitor set – indeed, the largest providers of browser engines (Apple and Google) are also the largest browser providers, and it is arguably relatively easy for a provider of a browser engine to also provide a browser*."

24. We strongly suggest that the CMA's emerging thinking can be taken a stage further. When thinking through the impact of vertical integration on current offerings of browsers and cloud computing, the CMA should look to what is currently available and not promoted rather than what is currently promoted to the benefit of the platforms. For example, a question is raised in Section 3 of WP1 about why Mozilla's Firefox can run its Gecko browser across different devices without incurring significant costs. This may be because Mozilla is pursuing a browser only business and it is not seeking to enhance the supplier's business or extract vertical integration value, or monopoly rents. Since it is not part of a platform, it has no interest in end user device churn or the lock in of value that is identified by the *USA v Apple* [2024] whereby handsets are retailed for $1000 more than they would be if restrictions over interoperability were lifted.

25. The issue of "browser lock in" and its benefits to the platform owner arise from the owner's ability to extract rent throughout the vertically integrated stack. For example, a browser can be built to operate with limited impact on the processing required in the end user device and hence would mean that there would be less usage of battery and less need to replace the device every few years. Apple forces handset churn: it makes a fortune over forcing sales of devices that are inflated by $1000 per handset, and then requires users to incur that cost every few years. See the following links to examples of competing browsers that are mainly unheard of.[16] As you will see, the Midori browser uses the smallest amount of battery power and is described as the

[16] https://www.rankred.com/best-lightweight-browsers/

greenest engine. A lot of others are based on the Gecko engine. In all cases, environmentally conscious users may wish to use other browsers than the ones promoted by the platforms, which are contributing to unsustainable impacts.

26. A significant point made in the article referenced is that those browsers with the lightest usage of the end user device: "Furthermore, the streamlined nature of these browsers minimizes the risk of security threats. With fewer complex features, there are fewer potential entry points for security vulnerabilities." See further at https://www.rankred.com/best-lightweight-browsers/

Relevance of factual record, history and context USA v Google (Ad Tech) [2023], European Commission v Google (Ad Tech) [2023] and CMA v Google (Ad Tech) [2022].

27. We recognise that seeking to be impartial means suspending disbelief when dealing with the potential outcome of current cases. This may be a significant challenge when the European Commission and the US DOJ are both taking cases against both main browser owners, and the CMA has its own parallel investigation into the Privacy Sandbox browser abuse and the previous 10 years of abuse with relation to Ad Tech in a further case. We suggest that the fact that these cases are running can and should be noted as relevant and important to the outcome of the mobile browsers investigation. The other cases are likely to be resolved in advance of the browser enquiry and the browser enquiry would need to take them into account at a later stage in any event. This will be necessary and important to timetable now.

28. However, by ignoring the long history of abuse, the CMA has also found that there is generally low engagement with mobile browsers by users and low awareness of different mobile browsers. Google submitted that offering both a mobile and desktop browser can have positive brand association benefits. For example, a desktop user who is highly satisfied with Chrome may be more likely to use it on their Mobile Device, and vice versa (para 2.35(b) of WP1). Safari and Chrome are preinstalled in their respective mobile operating systems, which makes competing for brand awareness more difficult.

29. Cause and effect here are important to distinguish. [redacted] Considering that their brands are now among the most recognised in the world, this is to be expected. What the CMA could perhaps be considering is the position that could arise in the counterfactual, competitive world, absent anticompetitive abuse.

30. The above factors that relate to supply side capacity and the true nature of competition between platforms can and should be addressed and included to enable the CMA to ensure that its assessment and their remedies are properly grounded. We also consider that the emerging thinking about desktop differences is reconsidered.

31. We provide our response to WP2 in a separate letter but suggest that both this letter and the letter concerning WP2 are and considered read by both teams as we make conclusionary points that are relevant to both.

Yours faithfully,

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Annex 1: Apple and Google History of Collaboration

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Competition between Google and Apple?

Apple and Google both operate tech platforms. They both provide services that use different browsers and offer users different apps on different phones, different operating systems, and different apps stores. At first sight, appearances suggest competing products being supplied that offer users a choice from competing platforms. Closer inspection reveals a more collaborative or symbiotic relationship and limited competition taking place.

Google has become a world-leading advertising company. It uses the personal data it gathers from users to target and optimize the delivery of ads. It innovates less than may be expected but buys up many innovations from others. To that end it has made hundreds of acquisitions since it was floated in 2004. Google is known to have created a dominant position in ad-funded search on desktops by about 2008.[1]

Also, "*Google developed its business model in a PC environment where the web browser was the core entry point to the Internet*."[2]

Seeing the growth of mobile devices, Google launched Android in 2008, which was free to mobile phone makers but subject to restrictive terms and conditions that allowed Google to harvest high levels of personal user data[3] and required a set of Google's Apps to be prominently be shown on the handset and function straight out of the box.[4] The Google apps included its six core apps: play store, search, maps, mail, YouTube, and its proprietary browser.[5] Google's business is in providing advertising services and running and operating a tech platform and licencing software for others to use for that purpose. Its activity is focused on gathering users' data for that purpose, as has been detailed in a series of EU Commission antitrust decisions.[6]

By contrast with Google, Apple is renowned for selling devices and distributing software via its app store, whether its range of Mac computers or the iPad, iPod, or iPhones. Of its $274.52 billion[7] turnover,

[1] Case AT 39740 EU Commission vs Google Search (Shopping)
[2] Case AT.40099. CMSN vs Google Android para 112 p 29
[3] Case AT.40099. CMSN vs Google Android fn 76 See email of 29 May 2010 from [Google Executive] to various.
Google executives, including [Google Executive] (Doc ID 1305-36754): "We absolutely do care about this because we need wifi data collection in order to maintain and improve our wifi location service (especially after having Street View wifi data collection discontinued). Our wifi location database is extremely valuable to Google because it is not a competitive market, even worse than the map data market. Skyhook is the only other viable alternative and there would be incredible risk to depend on them." Another indication for the importance of location data is that in its Android developer guide material, Google strongly encourages developers to use its proprietary Google Location Services APIs instead of the AOSP location APIs, see https://developer.android.com/guide/topics/location/index.html , printed and saved on 17 August 2017.
[4] Case AT.40099. CMSN vs Google Android See for example, e-mail of 26 May 2009, 5:pm, from [Google Executive] to Sergey Brin and other Google executives in relation to the 2008 Founders' Letter (Doc ID 1305-39872): "It's hard to believe, but we are on the verge of a tipping point. It is possible that in 2009, more internet capable smartphones will ship than desktop PCs. […] These changes are opening up opportunities for Google. Today, almost a third of all Google searches in Japan are coming from mobile devices. This is leading indicator of where the rest of the world will be soon. We are committed to optimizing our products (particularly Search!) for the most popular mobile platforms to take advantage of this trend."
[5] USA vs Google para 134. & EU commission vs Google (Android).
[6] Case AT 39740 EU Commission vs Google Search (Shopping), Case AT 40099 EU Commission vs Google Android, Case AT 40411 EU Commission vs Google Search (AdSense)
[7] https://s2.q4cdn.com/470004039/files/doc_financials/2020/ar/_10-K-2020-(As-Filed).pdf

more than 50%[8] is accounted for by iPhones and iPads, 10% for Macs, and 20% from services. The technology refresh cycle and continuing upgrades to operating systems software hugely benefits players such as Apple and Google. Devices need replacing from time to time and have become increasingly dependent on proprietary software, whether Apple's iOS or Google's Android. Apple is known as a company that designs products that are made by others, and one that derives its income mainly from sales of its products to consumers. It is a self-proclaimed champion of consumer privacy and regularly makes statements that denigrate advertising-funded platforms.

Nevertheless, staying ahead of the technology and innovation boundary means that its device business is risky – probably more risky than the billions in revenue it receives from Google for gathering end user data that Google can then monetise via advertising.

Apple as a source of end user data and the importance to Apple's business of income from ads

With regard to Apple's role as a gatherer of end user data for Google, certain facts are important. Apple sells approximately only 20% of all the consumer mobile devices sold worldwide,[9] while the majority of sales of mobile handsets by volume use the Google Android platform.

Apple in fact derives a lot of income from ads. It derives about $2 billion directly from advertising and is paid about $10 billion a year by Google for the default search setting on Apple Devices.[10] This provides Google with a vital source of search history data about Apple's end user's needs, wants, and desires. This source of intent data reinforces Google's dominance in search.

Moreover, Apple's sales of its users' data to Google account for nearly 20% of Apple's net income. This is highly significant in the context of Apple's other businesses. Apple receives Google's payments while incurring little or no cost to generate this revenue. The payments are therefore a stable, highly profitable source of income which is lower risk than Apple's devices business. As stated by the US department of Justice in USA vs Google:

> *"Google pays Apple billions of dollars in advertising revenue each year, with public estimates ranging around $8–12 billion. The revenues Google shares with Apple make up approximately 15–20 percent of Apple's worldwide net income."*[11]

These regular payments account for greater contribution to net profit than its entire Mac range of computers.[12] Accordingly, Google is Apple's biggest, and probably most important, customer.

Google's relationship with Apple: a vital supplier of end user data for advertising

[8] https://s2.q4cdn.com/470004039/files/doc_financials/2020/ar/_10-K-2020-(As-Filed).pdf and https://www.statista.com/statistics/382260/segments-share-revenue-of-apple/

[9] https://www.counterpointresearch.com/global-smartphone-share/

[10] USA v Google, paragraph 45. See also pictures of Tim Cook and Sundar Pichai at dinner together from the New York Times; https://www.nytimes.com/2020/10/25/technology/apple-google-search-antitrust.html

[11] USA vs Google para 118

[12] https://s2.q4cdn.com/470004039/files/doc_financials/2020/ar/_10-K-2020-(As-Filed).pdf

Looked at from Google's perspective, Apple's customer base is composed of consumers that are willing to pay a premium for its premium handsets, and are at the 'top of the market'. Moreover, from an advertising perspective, they are more frequent users of search, and even though more Android handsets are sold worldwide, Apple users make more searches than Android users. Also, Apple users' searches represent more valuable user base than the entirety of the user base on Android. This is because, for example, using US data , almost 50% of Google's search traffic comes from Apple.[13] *USA vs Google* estimates that Apple users' mobile data are 60% of US mobile data search usage.[14] It is also suggested by the DOJ that mobile device search usage is the fastest growing search distribution channel. There is no reason to believe this position is materially different in the UK or EU, but we recognise that Android devices achieve greater levels of market penetration in less developed economies.

Overall, we estimate that in the advertising market data derived from Apple users' searches has a higher value than that derived from Android users, for advertisers, making Apple a top 5 advertising data supplier.[15]

Outcomes of Coordination between Google and Apple

Google and Apple's relationship dates back to the early 2000's with Google's then CEO Eric Schmidt sitting on Apple's board. The two companies were not competitors at that time and Steve Jobs threatened Google[16] with "thermonuclear war" for launching Android as it could potentially have become a basis for competition with Apple. The reality is that it didn't. Both companies continue to avoid head-to-head competition as it is their mutual economic interest to do so as a result of the agreements they have entered into. In 2005, Apple began using Google as the preset default general search engine for Apple's Safari browser. In return, Google gave Apple a significant percentage of Google's advertising revenue derived from the search queries on Apple devices. Two years later, Google extended this agreement to cover Apple's iPhones. In 2016, the agreement expanded further to cover additional search access points: Siri (Apple's voice-activated assistant) and Spotlight Apple's system wide search feature making Google the preset, default search engine.[17]

By 2010, Google Search accounted for more than half of the traffic on the iPhone and almost a third of all mobile Internet traffic.[18] Ever since, Google has been the default supplier of search services for all of Apple's range of computer devices and its mobile handsets. Google is prominently displayed in a search bar on these Apple devices.

Apple has the technological capability to develop a search engine but, in the light of its relationship with Google, has not done so. The EU Commission calculated Google's capital investment in search up

[13] USA vs Google para 121.
[14] USA vs Google para 43.
[15] https://www.forbes.com/sites/johnkoetsier/2020/06/24/apple-just-made-idfa-opt-in-sending-an-80-billion-industry-into-upheaval/?sh=745193cc712c
[16] https://www.bbc.co.uk/news/technology-15400984#:~:text=Steve%20Jobs%20said%20he%20wanted,it%20took%20to%20do%20so.&text=Mr%20Jobs%20told%20author%20Walter,which%20use%20the%20Android%20software.
[17] See USA vs Google para 86 & Case AT.40099. CMSN vs Google Android footnote 82
[18] See Ramu Nagappan, "Report: Google commands more than half of iPhone's Web traffic"(27 January 2010), available at http://www macworld.com/article/1145926/google iPhone traffic.html, printed and saved on 11 April 2016.

to 2015[19] as $46,436 billion. It might be thought that Google would want to recoup that investment and Apple would be paying Google for the use of its (very expensive) search engine. Perhaps surprisingly, that is not the case. Instead, the value and benefit to Google of the default settings on Apple devices means Google is paying Apple. Even though it is in a monopoly position, and could in principle charge a monopoly price, Google must see the data from Apple and the need to keep Apple from developing its own search engine, as worth the price it is paying.

As the payments from Google to Apple are so high, it is Apple's single biggest customer which is a business relationship requiring senior level managerial focus and attention. Apple's economic incentive and its revenue share agreement is hence to support Google and drive traffic and data to Google, and not to compete with Google. Indeed, on close inspection it does not compete directly with Google hardly at all and the agreement provides considerable economic incentives to avoid such competition in the future. As stated in *Epic v Google*:

"Because Google reaps considerable profits from iOS users through its search arrangements with Apple, Google is not incentivized to compete more with Apple at the smartphone OS level and expend more resources attracting users from iOS to Android than it currently does. If it did not profit significantly from searches on iOS devices, Google might be more incentivized to, among other things, differentiate its Android platform from Apple with respect to the commissions it charges on app transactions. If Android competed with iOS on app transactions, the market competition would make Android apps cheaper for users and attract developers to launch their apps first (or even only) on Android. Instead, Google and Apple are cozy duopolists, offering virtually the same terms to developers and changing those terms in tandem (if at all). After a meeting involving senior executives of Google and Apple, notes of the meeting were exchanged between the two companies. The notes reflect: "Our vision is that we work as if we are one company."[20]

For example, it is noteworthy that the EU Commission has found that Apple and Google's device sales do not substantially compete on price. From 2009 to 2015 the EU Commission found that "*Apple smartphones have, on average, cost twice as much as Google Android devices. In addition, the average price difference between Google Android and iOS devices has been increasing, reaching a peak of 181% of Google Android devices average price in the first quarter of 2015*[21]. In the second quarter of 2015, the price difference decreased due to the launch of certain higher-end Google Android devices, while remaining in the region of 120% of Google Android devices average price. The EU Commission found that 80% of the products sold did not directly compete on price and that Apple and Google's offerings do not serve to constrain either company's business[22].

In truth, Apple and Google are not direct competitors but have a symbiotic relationship. Notably, for those investigating that relationship, it should be understood that loss of the data from Apple is viewed as a "Code Red" event for Google.[23] Likewise, Apple's living is made on the back of an important income from advertising – an income generated from its customers' searches that are monetised by

[19] Case AT 39740 EU Commission vs Google Search (Shopping) from Table 4.
[20] Epic v Google para 88
[21] Case AT.40099. CMSN vs Google Android para 504 p 109
[22] Case AT.40099. CMSN vs Google Android para 515 p112
[23] USA vs Google para 119

advertising by Google. Thus it is fair to say that 'sale of user data for advertising funded on line search' is an important, if not a critical, source of Apple's income.

As stated in *USA vs Google* the revenue sharing agreement or RSA has the following effect: "*Apple's RSA incentivizes Apple to push more and more search traffic to Google and accommodate Google's strategy of denying scale to rivals. For example, in 2018, Apple's and Google's CEOs met to discuss how the companies could work together to drive search revenue growth. After the 2018 meeting, a senior Apple employee wrote to a Google counterpart: "Our vision is that we work as if we are one company."*

We provide below a list below of further evidence and examples of the working relationship between Google and Apple that may be of interest to antitrust authorities and which underpin the business relationship. For two companies that used to share board directors the level of coordination is not unexpected but when taken together, show a disturbing pattern:

Apple Workbench

Workbench is an Apple tool for managing ad campaigns on Apple News. Default exclusive access is provided by Apple to Google's ad server as a third-party partner for Apple's advertising for its Apple News App: *"In order to utilize the [Workbench] features required, publishers must be using Google Ad Manager 360."*[24]

As part of the arrangement, Google promises that the data it collects will not be made available to any other rival organisations, since this would "*violate Apple policies*."[25] Thus, even if an app developer were interested in using alternate vendors to improve the monetisation of its apps, Google and Apple will use their corporate "policies" to restrict this choice.

Offering the advertising platform on Apple's News App is also complimented by Google's own Google News Showcase.[26] They appear to have organised a way for Google to monopolise the opportunity for advertising on news publications in different apps stores.

When Google then threatens news publishers' sources of income through its Privacy Sandbox restrictions on the Chrome Browser,[27] and also offers news publishers the "opportunity" to join its News Showcase for a small contribution to their costs (circa 20%) we see the way that Google is abusing its position to encourage news media to become apps on its platform, further enabling Google to extract more value.

[24] https://developer.apple.com/news-publisher/Workbench-Google-Ad-Manager-360.pdf (2019)
[25] https://support.google.com/admanager/answer/7560930?hl=en
[26] https://support.google.com/news/publisher-center/answer/10018888?hl=en-GB
[27] The "Privacy Sandbox" is a name given by Google to a series of proposals for changes to its web browser which will in practice restrict the ability of parties other than Google to gather data and will place Google in the middle or relationships between advertisers and users, and relationships between publishers and users. The proposals can be found here: https://www.chromium.org/Home/chromium-privacy/privacy-sandbox

Self-Preferencing of Apple iOS Apps for Advertising Revenue

Apple will continue to allow targeted advertising on its own Apps where it is de facto preventing it on competing apps with the introduction of its restrictions on third party in its iOS 14 pop up and its ATT and other policies. That is, provided such targeting is done through either: (i) Apple's advertising services, or (ii) Google's Ad Manager. This will privilege Apple's apps over other developers' in attracting advertising revenue.

Apple is exempting its own apps from the same policies it requires other apps to follow. For example, Apple does not provide the same notice and control, nor the same preference management required for rival apps for its own apps. Apple apps are able to collect and process personal data without having to abide by Apple's requirement on rival apps to disclose the notice and choice dialogue. Apple applies the "corporate ownership" rule to apply acceptance of Apple's policies across all its apps, without providing people the notice and choice dialogue on first use for each of Apple's apps.

Apple's notice in Apple News & Privacy setting states: "*We may collect, use, transfer, and disclose non-personal information for* ***any purpose***."[28] Thus, Apple's News app can continue to collect data associated with pseudonymous identifiers, even when a user would like to exclude such data collection by all apps. While Apple does allow people to reset this identifier at any time,[29] they cannot choose not to share the identifier with Apple's News or Stock app. "***You can reset the identifier at any time*** *by going to Settings > News, then turning on Reset Identifier.*"[30] We note Apple enables itself to collect such information specifically for advertising purposes: "*We may collect information such as occupation, language, zip code, area code,* ***unique device identifier****, referrer URL, location, and the time zone where an Apple product is used so that we can better understand customer behavior and improve our products, services,* ***and advertising.****"*

This is in contradiction to Apple's iOS 14.5 privacy policy which states that all apps must ask people's permission before any tracking occurs. "*Starting with iOS 14.5,* ***all apps are required to ask your permission before tracking you*** *or your iPhone across apps or websites owned by other companies to target advertising to you or share your information with data brokers.*"[31]

Moreover, Apple also collects users' content browsing and app engagement activity to generate behavioural audience profiles that publishers can use to increase the yield from their inventory: *"Publisher Audience Segments. Apple generates publisher audience segment data based on users who read or follow your content."*[32]

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[28] https://www.apple.com/sg/legal/privacy/en-sg (Last updated January 19, 2018).
[29] https://support.apple.com/guide/stocks/reset-the-identifier-or-report-concerns-st036cd9623f/mac

[30] https://support.apple.com/guide/iphone/save-news-stories-for-later-iphd1b6c7270/14.0/ios/14.0

[31] https://support.apple.com/guide/iphone/control-app-tracking-permissions-on-iphone-iph4f4cbd242/ios

[32] https://developer.apple.com/news-publisher/Campaign-API-for-News-Publishers.pdf (Dec 2020)

When Apple makes changes to its privacy policies, care is taken not to harm the relationship with Google. As reported by Bloomberg, and based on assessments by Bank of America, Apple's latest changes to its privacy policy will increase the value of Google's position as an online advertiser, to the detriment of other third-party advertisers, such as news publishers.[33]

Apple exempts Google's sign in from its policies, which it applies to smaller apps. Apple's policies exempt the largest apps and publishers, who can afford to operate their own single-sign in process. For example, Apple's Developer policies "4.8 Sign in with Apple" requires "Apps that use a third-party or social login service... to set up or authenticate the user's primary account with the app must also offer Sign in with Apple as an equivalent option." However, this requirement is "not required if: Your app exclusively uses your company's own account setup and sign-in systems." Thus, because Google does not allow authentication to its apps via rival authentication services, Apple has exempted Google from the policy they apply to other competitors. Thus, most smaller browser, maps, search or other apps that must rely on supply chain vendors for the identical data collection and processing are required to present Apple's authentication service.

Apple exempts Google's sign in from its policies, which it applies to social networks. In section v "Account Sign-in" of Apple's Developer Policies "5.1.1 Data Collection and Storage" form, Apple forbids apps to "require users to enter personal information to function, except when directly relevant to the core functionality of the app or required by law." While Apple's policies would seemingly restrict Google's apps from relying on users' personal data to join usage across various apps controlled by Google, the policy actually exempts Google's practice of auto-logging people into the Chrome browser when people are only accessing their Google-hosted email. However, Apple specifically targets social networks, like Facebook, in its policies while allowing Google's to continue its analogous data collection and processing. Section v continues "The app must also include a mechanism to revoke social network credentials and disable data access between the app and social network from within the app. An app may not store credentials or tokens to social networks off of the device and may only use such credentials or tokens to directly connect to the social network from the app itself while the app is in use." Why would consumers concerned about their personal data, prefer Apple to target only "social networks" rather than applying the policy to all apps that collect and process personal information and store alternative credentials and tokens "off of the device ?" Clearly Apple has not applied its policies equally to all apps.

Apple exempts Google's apps from requiring consent to Apple's notice, which it applies to other apps. In section iii "Permission" of Apple's Developer Policies "5.1.1 Data Collection and Storage" form, Apple requires apps to "secure user consent for the collection [of user or usage data], even if such data is considered to be anonymous at the time of or immediately following collection." Google has stated it will not show the Apple prompt and hence use alternate identifiers to track usage across its apps.[34] "When Apple's policy goes into effect, we will no longer use information (such as IDFA) that falls under ATT for the handful of our iOS apps that currently use it for advertising purposes. **As**

[33] https://www.bloomberg.com/opinion/articles/2021-04-23/apple-s-new-iphone-privacy-feature-may-help-facebook-google
[34] https://9to5google.com/2021/01/27/google-ios-14-allow-tracking

such, we will not show the ATT prompt on those apps, in line with Apple's guidance."[35] This is seemingly due to Google's ability to use its Firebase SDK to collect alternate identifiers. "***Firebase SDKs do not access IDFA****, though some have integrations with Google Analytics that may involve IDFA access.... If you are an AdMob or Ad Manager app publisher, consider using Funding Choices, which handles obtaining consent for serving personalized advertisements as well as* ***consent for tracking the user according to Apple's guidelines automatically****.*"[36]

Google relies on a Firebase SDK integration with the user ID from Google Analytics for the collection of activity associated with these alternate identifiers.[37] "*Google Analytics has a setUserID call, which allows you to store a user ID for the individual using your app. This call is optional, and is generally used by organizations that want to use Analytics in conjunction with BigQuery to associate analytics data for* ***the same user across multiple apps, multiple devices, or multiple analytics providers****.*"[38]

Google also collects user activity associated installing apps and with diagnosing why apps are not operating as expected. "*[Firebase]* ***InstanceID [is] Always collected. Generates per-installation identifiers that do not uniquely identify a user or physical device*** *[but do assign a unique identifier to each user's installation of the app]." "[Firebase] Collects "breadcrumb" logs if Crashlytics is used together with Google Analytics.* ***These logs identify user actions immediately before a crash along with crash counts****.*"[39]

Thus, Apple allows Google's apps that do not request such consent via Apple's notice dialog to continue to collect and process people's personal data and usage data.

Building walled gardens

Technically, apps are capable of being downloaded to devices from multiple suppliers across the web through a process called "side loading." In practice Google and Apple restrict users' ability to use this web functionality. Apple has adopted a walled garden strategy for many years, with integrated products and a proprietary apps store. Building parallel "Walled Gardens of apps stores" and stifling innovation on the open web appears to be a current Google project.[40] Coordination between Google and Apple at senior-level meetings has been referred to in *USA vs Google*, and it may not be a coincidence that both companies have independently developed their walled garden strategies or that they have a mutually

[35] https://blog.google/products/ads-commerce/preparing-developers-and-advertisers-for-policy-updates

[36] https://firebase.google.com/docs/ios/supporting-ios-14
[37] https://firebase.google.com/docs/ios/app-store-data-collection
[38] https://firebase.google.com/docs/analytics/userid
[39] https://firebase.google.com/docs/ios/app-store-data-collection#firebase_user_agent
[40] see Texas vs Google para 18: *"Google has an appetite for total dominance, and its latest ambition is to transform the free and open architecture of the internet. Google's plan is to create a walled garden around the internet in which it controls websites and mobile applications. Google calls its emerging venture the [redacted], a world in which publisher content is operated by Google. Internally, it refers to this model as [redacted]. Google's documented plan is to capture online publishers on the open internet and transform them into content creators generating revenue for Google on a completely closed platform—like YouTube content creators."*

reinforcing interest in stifling innovation and applications developments from being supplied over the Open Web.[41] Apple is also reported to use Google data centres for cloud storage.[42]

Both companies' walled garden strategies run counter to the aims expressed in the G7 announcement.

Restrictions on App Distribution and Walled Gardens supressing alternative web-based products

Both Google and Apple operate App Stores which are tied to their mobile operating systems, Android and iOS respectively. Both App Stores charge up to a 30% cut on payments made through the App Store or through apps on those operating systems. Both companies have limited the ability for users to obtain apps elsewhere or for apps to implement different payment mechanisms.

A European Commission report in 2016 reported that 47% of UK individuals surveyed said that when they access the news via news aggregator without clicking on the links to the whole articles. We understand a new report from search engine expert Rand Fishkin, which found that nearly 65% of ALL Google searches in 2020 ended without a user going to any other website. This shows that Google is well on the way to becoming a walled garden, one in which it promotes its own products over rivals and one where it curates the garden for its own benefit, limiting competition and driving up its profits. Rand Fishkin reports that over "*the last three years, Google's been the overwhelming beneficiary of increasing worldwide search volume*,"[43] but there was a (massive) 14 percentage point jump in searches without clicks to other sites from his 2019 analysis to 2020. These traffic patterns enhance existing risks of vertical foreclosure in related markets as products are effectively integrated into Google search.

Search and other data used for advertising

As described above, Apple has contracted for the Google Search engine to be the default engine on Apple's Safari browser, and on other search access points on Apple iPhones and other mobile devices .[44] Initial agreements were put in place from 2005 for the Safari browser, and from 2007 for Safari on Apple mobile devices, and in 2016 to cover further access points on mobile devices, such as Siri.[45] Over many years Apple has been paid billions of dollars[46] for prominently displaying Google to Apple users, from which Google then provides searches and obtains search data which helps it target ads. Google also appears to receive special access to the Apple ID, again an important source of information for advertisers.[47]

Privacy Lobbying

In a complaint lodged by the Texas Attorney General and a growing group of other US State Attorneys General against Google in late 2020, references are made to coordination between Google, Apple, and

[41] See further in Appendix I how open web functionality can provide competing alternatives to Apple and Google products and apps.
[42] https://www.lightreading.com/enterprise-cloud/infrastructure-and-platform/apple-partners-with-google---steve-jobs-spins-in-grave/a/d-id/740983
[43] https://sparktoro.com/blog/in-2020-two-thirds-of-google-searches-ended-without-a-click/
[44] USA v Google, paragraph 45.
[45] USA v Google, paragraph 86.
[46] USA v Google, paragraph 118.
[47] Texas v Google 2 And. Complaint *63 also suggests broad based collaboration between Apple and Google.

others to lobby to undermine government efforts to enhance users' privacy.[48] Further, on 6 August 2019, there was a meeting[49] where the attendees discussed the use of privacy as a mechanism and convenient tool for their commercially motivated changes. A few weeks later, in August 2019, Google announced the Privacy Sandbox. The Privacy Sandbox is a suite of proposals for changes to the Chromium browser engine and Chrome browser, an initiative where only Google will control all interoperable advertising data between publishers and marketers.[50]

The Texas complaint is based on documents trawled from Google and many other companies and refers to "active" coordination between such digital giants in relation to privacy.[51] The Texas complaint also refers to Apple and Google's coordination of their approach toward privacy and using privacy as a tool to drive users into their respective walled gardens.[52] The Texas complaint indicates that such coordination "*facilitates…efforts to exclude competition*."[53]

Coordinated browser changes to foreclose news publishers who are advertising competitors

Perhaps it is no coincidence that Apple has introduced ITP using privacy as an excuse for restricting competition and Google has announced the 'Privacy Sandbox', similarly using privacy a smokescreen.[54] Apple is acting in a vertical relationship where it is obtaining data for Google. It is clear from *Texas vs Google* that Google did not generate the Privacy Sandbox as a result of Apple's changes, but rather it had a pre-existing project to create a walled garden around the browser for its own commercial benefit.

Apple's ITP Discriminates among Publishers but benefits Google.

Apple's Intelligent Tracking Prevention or "ITP" imposes limits on the lifetime of a cookie. This benefits larger publishers or larger websites which are more likely to be visited more frequently. Google search, for example, is likely visited by most consumers multiple times a day, allowing Google to maintain its cookies and understand from them data about user preferences. Similarly, large publishers may be visited by a user once a day, with benefits for their ability to acquire user data and understand user preferences. Smaller websites or publishers and new entrants are therefore placed at an immediate disadvantage to big players by the programme. Moreover, Apple specifically impairs small publishers' ability to rely on supply chain vendors that could see the cookie multiple times per day across the web via ITP. Advertising firms are reported to have lost millions following the introduction of ITP.[55] Many vital online resources, such as news publishers, are among those most severely affected. Apple's actions that harm publishers benefits Google, its biggest customer.

ITP affects Google's advertising competitors

[48] Texas v Google, paragraph 142.
[49] Texas v. Google, para. 170.
[50] https://www.blog.google/products/chrome/building-a-more-private-web/
[51] Texas v Google, paragraph 143.
[52] Texas v Google, paragraph 18, 214, and 229.
[53] Texas v Google, paragraph 143.
[54] https://www.gov.uk/cma-cases/investigation-into-googles-privacy-sandbox-browser-changes
[55] https://www.theguardian.com/technology/2018/jan/09/apple-tracking-block-costs-advertising-companies-millions-dollars-criteo-web-browser-safari

As can be seen from the relationship that Google has with Apple in relation to Search data and Workbench, its competitive position is unlikely to have been materially affected by the ITP changes. Indeed, as they will have affected its advertising competitors, its competitive advantage will have increased. This is partly because advertisers seeking to avoid the impact of ITP on Safari shifted some of their spend to personalised ads on other browsers, such as the Google Chrome browser[56] and thus a direct shift of spend to Google's advertising system. Google will have benefited from Apple's changes that were implemented earlier than its own.

Google is also now introducing its own browser changes, which will in turn affect its advertising competitors and news and other publishers. As such, the full impact of ITP on publishers will in some ways only become apparent in conjunction with the impact of Google's changes. The net effect is increased harm to its rivals and benefits to Google.

Google's Web ID and Apple IS logged in

A number of the proposals within these programmes are very similar and interfere with the current system through which users sign into publisher websites, share their data with publishers and from which publishers then make money from advertising. News publishers in particular benefit from this type of online advertising.

Google is proposing a WebID single sign on through the browser,[57] and Apple is currently proposing a new standard for IsLoggedIn at the W3C.[58] It is perhaps notable that sign-on via any other web-based service is restricted in Apple's developer guidelines.[59]

Promotion of "First party cookie" and "Third party cookie" rhetoric for competitive advantage

Cookies are pieces of computer code. They function to maintain "state" in computing. They ensure that a computer session is maintained so that end users using computers that access webpages can see the pages in question without having to sign in each time a page is viewed. There is no inherent difference between cookies on a first party web domain and one on a third-party web domain. However, the widely used rhetoric adopted by both Google and Apple is that third party cookies are in some way "bad", and risk end user privacy to a greater extent than first party cookies.

There are distinct similarities between the rhetoric behind the introduction of both Apple and Google programmes, with both entities seeking to portray themselves as being concerned with end user privacy protection, while implementing or putting forward proposals which in fact benefit their respective businesses to mutual benefit at the expense of their competitors' businesses to the detriment of market dynamics, market structure and end user interests.

[56] While Apple's Safari is used by Apple device users, Google's Chromium browser engine powers Chrome and Microsoft's Edge and all other browsers in the market save Firefox, which accounts for a negligible percentage of browser usage.
[57] https://github.com/WICG/WebID
[58] https://github.com/privacycg/is-logged-in
[59] See further in Appendix I.

This may result from their coordination on privacy in their PR as noted in the Texas case referred to above.

One further example is that both have contributed to the W3C Privacy & Security questionnaire[60] which uses charged language and is discriminatory to smaller, independent organisations who must rely on supply chain partners to operate (whereas Apple and Google can rely on their walled garden of owned and operated services).

Another example is the attempt by Google and Apple to promote a commercially beneficial interpretation of First Party Sets.

Google & Apple are both using first party and third party designations to limit competition from alternative publishers and degrade end user privacy

A competing online advertising platform, such as a news publisher, has traditionally carried multiple ads from many different types of different advertiser. In the digital world, from sales of motor vehicles, holidays, to the promotion of prices and coupons on a wide range of consumer goods, many of these advertisements will rely in part on third party cookies – i.e. cookies which relate to a "third party" domain" – to optimise their advertising. By contrast, first party cookies will typically be relied on more by big brand companies that own their own websites and promote their own products.

Most third parties, and advertisers in the advertising supply chain other than Google and Apple rely on privacy-by-design pseudonymous identifiers ("IDs"). Those third parties do not associate the pseudonymous IDs with offline identity.

By comparison, Google and Apple, collect and process a large amount of truly personal data, including sensitive personal data, and associate that data with the consumer's actual offline identity. The risk to consumers of privacy invasion and disclosure, therefore, is higher from large platforms, than from the supply chains using IDs that support smaller web publishers.

While Apple and Google have framed conversations about consumer privacy in terms of "first party" and "third party" the distinction is not helpful in conveying the risk to consumer privacy in a particular transaction. By raising non-specific 'concerns' about the existence and ability of these third parties to support smaller web publishers, Google and Apple are coordinating to set up conditions where only large, vertically integrated corporations can participate in digital markets.

We have described Apple's Workbench above. The issue to note here is that Apple does not give people the choice of restricting their off-line identity from Apple's own advertising services. Moreover, Apple shares at least people's "home" information directly with Google: "*As with Workbench, targeting is based on users' home (not current) locations.*"[61]

[60] https://www.w3.org/TR/security-privacy-questionnaire/
[61] https://support.google.com/admanager/answer/7560930?hl=en

Google's Privacy Sandbox changes will disproportionately affect its rivals in online advertising

Google's Privacy Sandbox involves 23 changes that increase the functionality of its browser. Its own analysis of one change, which blocks third-party cookies, shows a disproportionately high impact on smaller news publishers, already among the most vulnerable of businesses as a consequence of the pandemic. Google itself found that its browser change affecting third-party cookies would result in a 52% decrease in average publisher revenue for the top 500 global publishers.[62] The same study finds that the median per-publisher decline in revenue will be 64%, with some publishers losing over 65% of their revenue.

The CMA estimates the impact on publishers as being closer to 70%.[63] Google has not put forward any credible proposal to mitigate this effect.

Instead, Google is using the announcement of the impeding impact on its competitors in its sales and marketing to advertisers as an additional reason to use its own platform – and its own platform will be unaffected by its changes. This is likely to have considerably contributed to the considerable increases in its recently announced earnings and to have damaged competing online publishing platforms, including news publishers.

W3C

The W3C is described by the US House of Representatives antitrust report as "*one of the most important organizations for browser standards.*"[64] The W3C's Mission and Vision are articulated in great detail on the W3C website.[65] They include a Web for All enabling "*human communication, commerce, and opportunities to share knowledge*" from and by any device, in order to fulfil a vision of "*participation, sharing knowledge, and thereby building trust on a global scale*". Essentially, the W3C stands for a decentralised and Open Web architecture; not one that is controlled by a small number of major platforms operating a series of walled gardens.[66]

However, the W3C is dominated by Google. The House report refers to Google being "*significantly overrepresented in the W3C web platform incubator community group*", with 106 employees fielded to the W3C, "*more than eight times the number of employees from Microsoft, the next largest stakeholder represented*."[67] By contract, most companies will only have one representative at the W3C. One player stated to the House that "*Google's monopoly position and aggressive rate of shipping non-standard*

[62] https://services.google.com/fh/files/misc/disabling_third-party_cookies_publisher_revenue.pdf (Aug 2019)
[63] CMA Final Report paragraph 44 at https://assets.publishing.service.gov.uk/media/5efc57ed3a6f4023d242ed56/Final_report_1_July_2020_.pdf
[64] https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf?utm_campaign=4493-519
[65] https://www.w3.org/Consortium/mission
[66] One of W3C's Design Principles is *"Web for Rich Interaction The Web was invented as a communications tool intended to allow anyone, anywhere to share information. For many years, the Web was a "read-only" tool for many. Blogs and wikis brought more authors to the Web, and social networking emerged from the flourishing market for content and personalized Web experiences. W3C standards have supported this evolution thanks to strong architecture and design principles."* https://cio-wiki.org/wiki/World_Wide_Web_Consortium_(W3C)
[67] https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf?utm_campaign=4493-519

features frequently reduce standards bodies to codifying web features and decisions Google has already made."[68]

If properly followed, the W3C's goals should be consistent with the goals of competition law and privacy protection. Users should be offered meaningful choice in a competitive market and can then provide meaningful consent to the sharing of their personal data. Browser independence and its operation to and for the benefit of the users as the user's agent is a central tenet of web design. Ensuring this independent "User Agent" functionality is currently under very significant threat and this in turn threatens the web's interoperable structure.

Indeed, because Google has already been promoting "samesite" since May 2019,[69] its approach appears to be based on a strategy of taking steps to fragment the web and create "a first party state," and a walled garden entirely at odds with the decentralised Open Web and W3C's objectives. The Privacy Sandbox proposals thus raise fundamental issues for W3C.

As we shall see further below, Google has advanced a First Party Sets proposal to twist the definitions of "First Party" in the context of its blocking of third-party cookies and to enable Google and other players to exempt a preferred group of big companies from that exclusionary practice. We note, with considerable concern, from the exchange on 27 January in the Same Party cookie attribute thread, that Apple supported Google's first party sets proposal.[70]

The W3C Technical Advisory Group ("TAG") considered Google's first party sets proposal. As the TAG statement then acknowledges, the relationship between the browser and the web is one where the browser needs to operate in the user's interest as the User's Agent. The TAG identifies that there is problem when browser changes are put forward that benefit the browser owner's own commercial interests; as they benefit Google (and potentially other large players such as Apple) in this example.

In simple terms the TAG is recognising that there is a conflict of interest where a browser is owned and operated for the owner's commercial interests not the end user interests. This is noted to be contrary to the WC3's design principles – see Put user needs first (Priority of Constituencies).[71]

The TAG also raised concerns about whether the proposal could be compliant with data protection law, considering the difficulty of making end users aware of the members of a first party set. It then notes that the proposal is likely to be "*harmful to the web*" "*fragment the web platform*", and:

> "*We believe the pushback from other implementors is a strong message that reinforces our concerns that this proposal can result in detrimental effects to the greater web ecosystem.*

[68] https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf?utm_campaign=4493-519
[69] https://web.dev/samesite-cookies-explained/#changes-to-the-default-behavior-without-samesite
[70] Krgovind (Chrome engineer), @Torgo "Thank you for taking a look at this proposal! I'd like to point to support from Edge, and support to adopt in PrivacyCG from Safari. First-Party Sets is currently under discussion in PrivacyCG, and the SameParty cookie attribute was also discussed there. The result of the SameParty discussion is cfredric/sameparty/issues/2."
[71] https://www.w3.org/TR/design-principles/#priority-of-constituencies

It is likely that this proposal only benefits powerful, large entities that control both an implementation and services."[72]

Google's First Party Sets proposal would have the following anticompetitive effects:

1. Increase Google's control over access to websites through the browser;

2. Increase Google's dominance in browser developments; and

3. Involve the sharing of domains among different competing organizations that would have the effect of a collective agreement over which businesses could be viewed as members of the "First Party Set" (this is a new and worrying example of the risks of anticompetitive coordination between competitors and members of a tight oligopolistic ecosystem).[73]

When reviewing the case against Google, dates are important. The First Party Sets proposal was first advanced in February 2019, and Apple introduced ITP 2.1 that same month, which impaired smaller publishers' ability to rely on vendors to help them operate their business by treating even JavaScript-set first-party cookies differently than server-set first-party cookies. Google's Same Site labelling began in May 2019. This is consistent with the evidence referenced in *Texas vs Google* that suggests Google's Privacy Sandbox was preceded by Project [X] which was designed to enclose the web.[74] Meetings between Google and Apple CEOs are likely to have taken place throughout, given the importance of their commercial relationship and efforts to enclose the web and build their walled gardens.

Mutual revenue sharing among the ecosystem; reinforcing Google's dominance at the centre of the web

[72] https://github.com/w3ctag/design-reviews/blob/main/reviews/first_party_sets_feedback.md

[73] As noted by D Applequist, the TAG Co-chair 15th March 2021 raised similar concerns to those that J Rosewell had raised many months earlier about governance and who was making decisions in whose interests: "In the PrivacyCG call last week (https://github.com/privacycg/meetings/blob/main/2021/telcons/03-11-minutes.md), Kaustubha stated that one mitigation against misuse of FPS would be to "require all the domains in the set are owned by the same organization." I'd like to drill down on that. First of all, who is requiring that? Would it be up to the browser maker to do so? In which case, does this mean there would be specific allow-lists of first party sets (the "UA policy")? It's asserted that FPS is better than browsers that ships with "an entity list that defines lists of domains belonging to the same organization" because it allows these organisations to declare their own list of domains. However, isn't a UA policy just another list of allowable domains? Secondly, what counts as a an "organization" in this instance? Amazon.co.uk and Amazon.com, for example, are two distinct organisations in two different privacy-regulatory regions. So, in that sense treating them both in the same first party may be counter to relevant data protection laws?

[74] Texas vs Google Amended Pleading page 7 para 18 "Google's current dominance is also merely a preview of its future plans. Google's latest announcements with respect to its Chrome browser and privacy will further its longstanding to create a "walled garden"—a closed ecosystem—out of the otherwise-open internet. At the same time, Google uses "privacy" as a pretext to conceal its true motives." And see Section 9 which details Project X [a redacted project name] that preceded the Privacy Sandbox. As stated in para 261 internal Google documents indicate that end user privacy protection formed no part of Google's design. "For Google, Project X walled garden meant two things: controlling the design of publishers' ad space, then forcing those publishers to sell their ad space exclusively through Google's products. According to internal Google documents, this strategy would permit Google to extract even higher intermediation fee". CMA/ ICO should request Google's documents that are referred to in this section. https://www.texasattorneygeneral.gov/sites/default/files/images/admin/2021/Press/Redacted%20Amended%20Complaint%20FILED%20(002).pdf

As explained in *USA vs Google*[75] in Section 6, Google uses revenue sharing agreements extensively with many companies such as mobile communications companies, that share search revenues and encourage others to increase the usage of Google's core search product:

> *"Finally, Google provides a share of its search advertising revenue to Android device manufacturers, mobile phone carriers, competing browsers, and Apple; in exchange, Google becomes the preset default general search engine for the most important search access points on a computer or mobile device."*

They create a system of mutually reinforcing incentives with each player in the Google ecosystem oriented toward ensuring that Google is successful and also thereby ensuring that the entity signing up to revenue sharing is also successful. Between actual and potential browser competitors these agreements act to block off search access points from competition.

Mutual revenue sharing between competitors, or potential competitors, carries the clear incentive to mutually promote volume, with the implication that neither will reduce prices or otherwise increase volume at the expense of the other. As competition and competitive response and entry is impeded, this coordination results in serious consumer harm: volume is jointly set to the monopolistic level and rivals cannot expand to fill the gap.

Agreements with News Publishers

Google has recently entered into another revenue sharing agreement with News Corporation.[76] This global deal between two US companies includes UK titles such as The Times, The Sunday Times, and The Sun. It explicitly refers to the sharing of ad revenues via Google ad technology services. The agreement will affect other UK news publishers and plurality of the media in the UK. Alongside other agreements detailed in *USA vs Google,* the business generated via agreements with News Corporation further strengthens Google's dominance in search. Also, Google is incentivised to drive traffic to its own properties that feature News Corporation over other news rivals, further damaging news publishers, who are also carrying advertising and hence rivals to Google in the sale of online ads. While the deal looks to be highly beneficial to both News Corporation and Google, its anti-competitive consequences mean that it should be restrained.

We understand that similar agreements are being offered to others. The terms are likely to be onerous and seek to avoid the full effects of the proposed Australian Legislation and further legislation contemplated by the UK and other countries.

Examples of Historic Collaboration

Moreover, there is evidence to suggest that collaboration between Apple and Google goes back a long time. For example, in 2011, the US Department of Justice settled a case brought against the two

[75] https://www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws
[76] https://newscorp.com/2021/02/17/news-corp-and-google-agree-to-global-partnership-on-news/
https://www.theguardian.com/media/2021/feb/17/news-corp-agrees-deal-with-google-over-payments-for-journalism

companies (and other Silicon Valley players)[77] in relation to no-poaching agreements which were "*created and enforced by senior executives of these companies*."[78]

Conclusions

Apple and Google avoid competing and help each other out as would be expected from their agreements and mutually beneficial business relationship. They are not, in truth, easily described as competitors.

Consumers suffer from their approach toward privacy invasion and restricted choice. Their walled gardens limit users seeing and obtaining apps from alternative suppliers. They limit the visibility and opportunity for users to use the open internet and threaten the development of the Open Web.

Their mutual strategic interest is to increase their already strong market positions and raise barriers for entrants.

Innovation on the web, a globally distributed platform, is supressed. The W3C's mission is threatened.

We look forward to supporting the government's initiative with relation to international cooperation but remain concerned that it will have limited effect in practice if action is not also taken in the interim to prevent further damage from occurring.

[77] U.S. v. Adobe Systems, et al., Complaint , September 24, 2010, https://www.justice.gov/atr/case-document/complaint-0
[78] Russell Pittman, "A Note on Antitrust, Labor, and "No Cold Call" Agreements in Silicon Valley", *Competition Policy International*, 16 December 2020