MOBILE BROWSERS AND CLOUD GAMING

Appendix B: Google's agreements with device manufacturers and their impact on Android choice architecture

22 November 2024



1. Appendix B: Google's agreements with device manufacturers and their impact on Android choice architecture

- 1.1 Section 8 of this provisional decision report ('The role of choice architecture in mobile browsers') refers to the agreements that Google has entered into with Original Equipment Manufacturers (OEMs) that affect mobile browser choice architecture across Android devices.
- 1.2 In this Appendix, we consider the following types of agreements in relation to Chrome between Google and OEMs Placement Agreements (PAs) and Revenue Sharing Agreements (RSAs), and the impact that has on the choice architecture on Android devices.
- 1.3 This Appendix provides a greater level of detail regarding:
 - (a) The key agreements in place between Google and OEMs in relation to Google Search and Chrome.
 - (b) The key terms of PAs and RSAs between Google and OEMs in relation to choice architecture for mobile browsers.
 - (c) Summary of the analysis of Google's PAs and RSAs with OEMs.

Key agreements in place between Google and OEMs in relation to Google Search and Chrome

Android Compatibility Program, EMADA and Chrome/Search licences

- 1.4 We focus on the PAs and RSAs between Google and Android manufacturers, pursuant to which manufacturers receive payments from Google for activated devices that fulfil conditions regarding the placement and access to Google Search and Chrome.
- 1.5 However, entering into these agreements is dependent on being party to other agreements, which we explain briefly here. These other agreements are explained in more detail in CMA's Mobile Ecosystems Market Study (MEMS) report.¹
- 1.6 While the Android operating system is based on open-source software, to license the Android name and logo, OEMs must enter into an agreement called the

¹ MEMS Appendix E: Google's agreements with device manufacturers and app developers, accessed on 7 November 2024.

- Android Compatibility Commitment (**ACC**) and comply with the definition of the Android operating system set out in the Compatibility Definition Document (**CDD**).²
- 1.7 OEMs that have entered into the ACC and comply with the CDD can then enter into the European Mobile Application Distribution Agreement (**EMADA**). Under this agreement, OEMs pay Google a per-device licence fee to license a collection of Google apps and services, known as Google Mobile Services (**GMS**).³
- 1.8 The collection of apps and services licensed under the EMADA include popular apps such as Gmail, Maps, YouTube and the Play Store (the primary app store on the Android operating system).⁴
- 1.9 Prior to 2018, the Google Search App and Chrome applications were licensed on Android through the GMS suite of applications. In a 2018 decision, the European Commission mandated that the Google Search App and Chrome apps could no longer be bundled in this way.⁵
- 1.10 Following this decision, OEMs can now also choose to license the Google Search App and/or Google Chrome apps through separate licences, as these services are not included in the GMS suite. There are no fees associated with these licences.
- 1.11 OEMs that have entered into the ACC, CDD, the EMADA and Google Search and Chrome licences, are then eligible to enter into a PA and/or an RSA.⁶ Figure B.1 illustrates the relationship between the different types of agreements.⁷

² MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E9, paragraph 19-21. ³ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E12-E13, paragraph

^{31-36.}

⁴ MEMS Final report, page 82; Appendix E: Google's agreements with device manufacturers and app developers, page E2, paragraph 6.

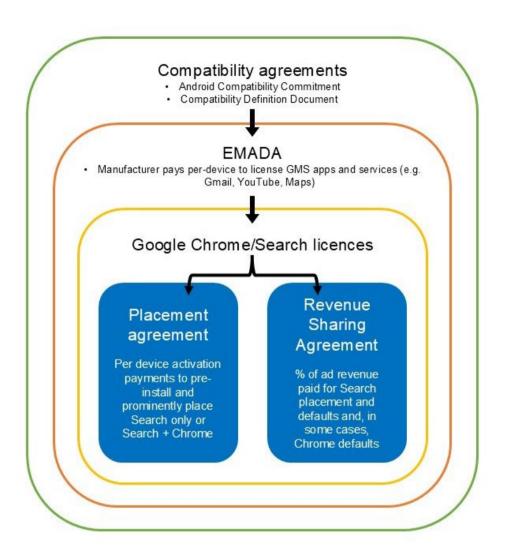
⁵ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E18, paragraph 51.

⁶ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E18, paragraph 52.

⁷ Adapted from MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E4, figure E1.

Placement and Revenue Sharing Agreements

Figure 1.1: The relationship between agreements. Eligibility for PAs and RSAs is dependent on the manufacturer having Chrome and Search licences and a valid EMADA, which is in turn dependent on being compliant with the ACC.



Source: Illustration created by the CMA.

- 1.12 OEMs can choose to enter into a PA and/or an RSA, conditional on entering into the EMADA and having licensed Google Search and Chrome. For some OEMs, the type of RSA they enter into is known as the Google Mobile Incentive Agreement (**GMIA**).⁸ Henceforth, we use the term RSA to also include the GMIA.
- 1.13 PAs allow manufacturers to earn per-device activation payments, paid by Google, provided that they comply with agreement terms to pre-install and place prominently either the Google Search App only or both the Google Search and Chrome apps.⁹

⁸ Google's response to CMA' information request [%].

⁹ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E19, paragraph 54.

- 1.14 As detailed below (see paragraph B.33 B.35), OEMs are incentivised to enter into PAs through these payments, which offset the licensing fees they pay to enter into the EMADA.¹⁰
- 1.15 RSAs allow manufacturers to earn revenue share through specific search access points on Android devices. 11,12
- 1.16 These agreements are not mutually exclusive; device manufacturers may enter into both a PA and an RSA.

Current arrangements between Google and Android device manufacturers

- 1.17 Most OEMs that enter into the EMADA and separate licences for Google Search and Chrome also opt to have a PA. Both the PAs and the RSAs are dependent on the OEM being party to an EMADA agreement and obtaining Google Search and Chrome licences. Google stated that typically manufacturers that enter into an RSA, will also have a PA with Google.¹³
- However, Google also stated that it is possible to enter into a PA and not an RSA and that it is common for OEMs to do this.^{14,}
- 1.19 Both PAs and RSAs appear to be prevalent across the top device manufacturers in the UK. Google has PAs and RSAs with at least [≫] manufacturers that ship to the UK. We have reviewed agreements from OEMs that represent a large majority of UK Android users. 16
- 1.20 Device activations covered by the agreements we have reviewed account for, in 2022, a total of [≫] [3 to 15 million] new individual devices in the UK. Google stated that not all such activations qualified for revenue sharing under the OEMs' RSAs.¹⁷

Google's motivations for developing PAs and RSAs

1.21 The majority of Google's revenue comes through Google Search and advertising. 18 Though advertisers can publish across multiple different services (eg Search, YouTube, Maps), Google Search remains central to generating revenue

¹⁰ Note of meeting with [≫]; Responses to CMA requests for information; [≫] response to the CMA's information request [≫]; [≫] response to the CMA[≫]. [≫] response to CMA's information request [≫].

¹¹ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E19, paragraph 54.

¹² [%] response to the CMA's information request [%].

 $^{^{13}}$ Google's response to the CMA's information request $[\hspace{-0.2em} \hspace{-0.2em} \hspace{-0$

¹⁴ Information provided to the CMA by Google, 23 October 2024.

¹⁵ Google's response to the CMA's information request [%].

¹⁶ The sample is defined based on Android UK market share Mobile device vendors: market share 2012-2023 | Statista, accessed on 7 November 2024, as well as covering OEMs with high numbers of UK device activations under these agreements, from [≫] response to the CMA's information request [≫].

^{17 [%]} response to the CMA's information request[%].[%].

¹⁸ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E19, paragraph 54.

from advertisers, ¹⁹ where, for example, publishers may pay an amount every time a user clicks on their content in the search results.

- 1.22 As such, one possible avenue to increase revenue is through the search access points covered by the terms of the PA, RSA and the GMIA ensuring that Google Search is highly visible and accessible to users compared to other search engines. Google Chrome is a key access point for search,²⁰ listed as such in the RSA. This is also reflected in the structure of the RSAs. [\gg].²¹
- 1.23 Google has also acknowledged the role that default apps have in driving Search traffic, [≫].²²
- 1.24 Google views the agreements they have with device manufacturers as [\gg].²³
- 1.25 As such, they make significant investment into agreements with manufacturers, covering a large proportion of activated Android devices [≫].²⁴
- 1.26 Several OEMs reported that pre-loading the Google Search and Chrome apps as laid out in the terms of PAs and RSAs carries benefits for their users, for example, by offering an improved and consistent experience to users.²⁵ [≫] submitted that its users expect apps such as Google Search and Chrome to be available on Android devices.²⁶
- 1.27 OEMs also receive financial incentives for entering into the agreements. For example, OEMs receive per-device activation payments for fulfilling terms of the PAs, [%].²⁷ [%].

Table 1.1: Payments currently made under EMADA and placement agreements for UK devices by device tier²⁸

Agreement type	Tier 1	Tier 2	Tier 3
[%]	[%]	[%]	[%]
[≫]	[%]	[%]	[※]
[%]	[%]	[%]	[%]

¹⁹ One Google VP commented: "Search is the revenue engine of the company", page1 Trial Exhibit-UPX2044: U.S.v. Plaintiff States v. Google LLC., accessed on 7 November 2024.

²⁰ As described by one Google VP: "Chrome exists to serve search", page 3 Trial Exhibit - UPX0809: U.S. and Plaintiff States v. Google LLC., accessed on 7 November 2024.

²¹ [%] response to the CMA's information request [%] and [%] response to the CMA's information request [%].

²² Google's internal document [%], DOCID [%].

²³ Google's response to the CMA's information request [%]; Google's internal document [%] DOCID [[%]; [%], Google's internal document [%] DOCID [%].

²⁴ [%] internal document [%] DOCID [%]; [%] internal document [%] DOCID [%].

²⁵ Responses to CMA requests for information; [≫] response to the CMA's information request [≫]; [≫] response to the CMA's information request [≫]; [≫] response to the CMA's information request [≫]. Note of meeting with [≫].

²⁶ Note of meeting with [≫].

²⁷ [≫] response to the CMA's information request [≫].

²⁸ Payment data from Google's response to the CMA's information request [×].

- 1.28 Based on these payments, OEMs will only recoup the licence fees paid under the EMADA if they comply with terms in the PA relating to both Google Search and Chrome (as opposed to search terms only), providing an incentive to comply maximally with the terms of the PAs.
- 1 29 Payment data from 2023 suggests that OEMs do recoup the payments made under the EMADA, with Google paying out more in PA activation payments for UK devices [%] than it receives in UK EMADA licensing revenues [%].²⁹ [%] acknowledged that the earnings made through its PA are used to offset the costs it pays to enter the EMADA.30
- 1.30 OEMs that choose to enter into RSAs will then receive further financial incentives by complying with terms relating to Google's apps and services, depending on the device tiers that they choose for the configuration of their devices on a device-bydevice basis.31
- 1.31 Google makes substantial payments to OEMs under these agreements – in 2023. it paid approximately [%] [\$2 – 3 billion] globally under RSAs to OEMs that comprise a majority market share in the UK Android market. 32
- 1.32 Several OEMs told us that the financial incentives they receive from PAs and RSAs are key motivators for entering into and complying with the terms of these agreements.33
- 1.33 [%].³⁴ However, negotiating power may be conditional on the OEM and its relationship with Google, such that the financial benefits of these agreements may be more favourable to larger manufacturers with a larger market share.
- 1.34 Stakeholders have submitted that it is very difficult for other browser vendors to replicate these types of agreements with OEMs. Firstly, pre-installation and default status out-of-the box are considered desirable by multiple browser vendors, and several browser vendors have expressed the view that they welcome opportunities to develop agreements of their own. 35
- 1.35 Google pays substantial revenue shares and activation payments to device manufacturers for fulfilling the terms of the PAs and RSAs. Many of the browser vendors we spoke to told us that, while they had attempted to set up agreements

²⁹ Google's response to the CMA's information request [%].

³⁰ [%] response to CMA's information request [%].

³¹ Google's response to the CMA's information request [] and Google's response to the CMA's information request [%]. ³² Google's response to the CMA's information request [%].

Note of meeting with [\gg]; Responses to CMA requests for information; [\gg] response to CMA's information request [\gg]; [\gg] response to the CMA's information request [\gg]. [\gg] response to the CMA's request for information, [\gg]. 34 [%] response to the CMA's information request [%].

³⁵ Notes from meetings with: [※]; [※]; [※]. [※] response to the CMA's request for information [※].

of their own, these agreements were difficult to set up and mostly unsuccessful.³⁶ Several of these browser vendors said that they deem the cost of these agreements to be too high,³⁷ especially given that any incentive agreements they developed would have to compete with the agreements Google currently has in place.

- 1.36 The PAs and RSAs Google has in place allows them to be pre-installed, placed prominently and, in some cases, set as the default browser on Android devices out-of-the-box.
- 1.37 Google has highlighted that the agreements it has with OEMs are optional and non-exclusive, with OEMs free to install other browsers on their devices.³⁸
- 1.38 However, most manufacturers do not pre-install multiple browsers unless it is the manufacturer's first party browser. For example, data from Google shows that in the 12-month period from March 2023 to February 2024, Android devices were pre-installed with an average of 1 to 2 browsers.³⁹
- 1.39 Therefore, the current pre-sets may limit rival browser vendors from accessing users of Android devices.
- 1.40 Finally, some device manufacturers are also browser vendors. While the agreements they have with Google do allow them to pre-install, place prominently and set as default their own browser, the PAs and RSAs mean that they receive payments through [\gg].⁴⁰
- 1.41 Overall, the PAs and RSAs in relation to Chrome between Google and OEMs mean that Google is able to specify detailed requirements about the use of choice architecture in relation to Chrome across Android devices.

Key terms of PAs and RSAs between Google and OEMs in relation to choice architecture for mobile browsers

1.42 In this section, we have analysed key terms in relation to choice architecture (eg pre-installations, placement, defaults and uninstallations of Chrome) across two types of agreements – PAs and RSAs between Google and OEMs.

 $^{^{36}}$ Response to CMA requests for information; [\gg]; [\gg]; [\gg]; [\gg]. Note of meeting with [\gg]; Note of meeting with

[[] \gg]. 37 Notes from meetings with: [\gg]; [\gg]; [\gg]; [\gg].

³⁸ Google's response to Working Paper 5 – The role of choice architecture in competition in the supply of mobile browsers, 5 July 2024, paragraph 20.

³⁹ Google's response to the CMA's information request [×].

⁴⁰ [≫] response to the CMA's information request [≫] and [≫] response to the CMA's information request [≫].

Placement Agreements (PA)

- 1.43 Under the PAs, Google pays manufacturers 'activation payments' for each device on which they pre-install the Google Search or Google Search and Chrome apps and satisfy certain placement obligations for either (i) the Google Search app, or (ii) the Google Search and Chrome apps.⁴¹
- 1.44 The following section focuses on pre-installation, placement and default clauses as regards Chrome for UK devices under the PAs for OEMs representing a large majority of UK Android users.
- 1.45 If OEMs pre-install and comply with the placement requirements in respect of Google Chrome in addition to Google Search they earn a substantially larger payment per device.⁴²
- 1.46 Google submitted that the PAs are optional and standalone, ie there is no requirement in any other Google agreement for an OEM to also enter into a PA. Google further submitted that the PAs operate on a per-device basis, ie the OEM can choose on a device-by-device basis whether to meet the requirements in the PAs and earn activation payments. Google further submitted that the PAs are non-exclusive, ie they do not prevent an OEM from pre-installing other browsers or placing them favourably.⁴³

Pre-installation requirements under the PAs

1.47 Our review of PAs for OEMs that represent a large majority of UK Android users indicates that in order for an OEM's mobile device to qualify for the higher Chrome-related activation payments, the OEM is required to pre-load Chrome under a licence granted by a 'Chrome License Agreement'.⁴⁴

Placement requirements under the PAs

1.48 Our review of PAs for OEMs that represent a large majority of UK Android users indicates that, in addition to pre-loading Chrome, for an OEM's device to qualify for the higher Chrome-related activation payments under the PAs, the OEM must commonly place Chrome in the Google folder on the device's default home screen (if not more prominently).⁴⁵

⁴¹ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E19, paragraph 54.

⁴² MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E19, paragraph 54.

⁴³ Google's response to the CMA's information request [※].

⁴⁴ [%].

^{45 [%].}

1.49 Our review of PAs for OEMs that represent a large majority of UK Android users indicates that for a device to be eligible to receive the higher Chrome-related activation payments the OEM is commonly required to [\gg].

Default clauses under the PAs

Our review of PAs for OEMs that represent a large majority of UK Android users has not identified clauses that require Chrome to be set as the default browser. 46 Google confirmed that its PAs do not contain obligations to set Chrome as default. 47

Uninstallation clauses under the PAs

- 1.51 Our review of PAs for OEMs that represent a large majority of UK Android users has not identified any clauses that require OEMs to prevent users from uninstalling Chrome.⁴⁸
- 1.52 However, we have found clauses that [%].49

Revenue Sharing Agreements (RSA)

- 1.53 As set out in the CMA's MEMS report, under its RSAs, Google pays some manufacturers a proportion of its net advertising revenue from specific search access points on their devices in return for meeting a number of placement and promotion requirements.⁵⁰
- 1.54 Our review of RSAs of OEMs that represent a large majority of UK Android users shows that payments from Google can include [≫].⁵¹
- 1.55 Google explained that Google's RSAs [%].52
- 1.56 The following section focuses on pre-installation, placement and default requirements as regards Chrome for UK devices under RSAs of OEMs representing a large majority of UK Android users.

Pre-installation clauses under the RSAs

1.57 Our review of RSAs of OEMs representing a large majority of UK Android users indicates clauses that appear to be a *de facto* requirement to pre-install Chrome

⁴⁷ Google's response to the CMA's information request [×].

^{46 [%]}

^{48 [%}

^{49 [1}

⁵⁰ MEMS Appendix E: Google's agreements with device manufacturers and app developers, page E19, paragraph 54.

⁵¹ [%].

⁵² Google's response to the CMA's information request [%].

for a device to qualify for additional revenue share (that OEMs may elect for on a device-by-device basis) are common.⁵³

- 1.58 [%].
- 1.59 [%].
- 1.60 Our reviews of RSAs of OEMs representing a large majority of UK Android users indicates that some RSAs contain clauses that [≫]. These clauses apply to certain higher tiers of devices that OEMs may elect to configure on a device-by-device basis.⁵⁴
- 1.61 [%].⁵⁵ [%].⁵⁶ [%].⁵⁷
- 1.62 [%].^{58,59} [%].⁶⁰ [%].⁶¹
- 1.63 [%].^{62,63,64} [%].⁶⁵ [%].⁶⁶
- 1.64 [%].^{67,68,69}

Placement clauses under the RSAs

- 1.65 Our review of RSAs of OEMs representing a large majority of UK Android users indicates that some RSAs contain clauses that give OEMs the option to qualify for certain higher revenue share tier [≫]:⁷⁰
- 1.66 [\gg].⁷¹
- 1.67 [%].⁷² [%].⁷³ [%].⁷⁴

```
<sup>53</sup> [%].
<sup>54</sup> [%].
<sup>55</sup> [%].
^{56} [\gg] submission to the CMA [\gg].
<sup>57</sup> [%] submission to the CMA [%].
<sup>58</sup> [%].
^{59} [\gg] response to the CMA's information request [\gg].
^{60} [\gg] submission to the CMA [\gg].
<sup>61</sup> [※] response to the CMA's information request [※].
^{62} [\gg] response to the CMA's information request [\gg].
<sup>64</sup> [%] response to the CMA's information request [%].
^{65} [\gg] submission to the CMA [\gg].
<sup>66</sup> [≫].
^{67} [\gg] response to the CMA's information request [\gg].
<sup>68</sup> [%]. [%] response to the CMA's information request [%].
^{69} [\gg] response to the CMA's information request [\gg].
<sup>70</sup> [※].
<sup>71</sup> [%].
<sup>72</sup>[%].
^{73} [\gg] submission to the CMA [\gg].
<sup>74</sup> [※] response to the CMA's information request [※].
```

- 1.68 [**%**].⁷⁵
- 1.69 [%]. ⁷⁶ [%]. ⁷⁷ [%]. ⁷⁸

Default clauses under the RSAs

- 1.70 Our review of RSAs of OEMs representing a large majority of UK Android users indicates that some RSAs contain clauses that require Chrome to be set as the default browser on the device for a device to qualify for certain revenue share tiers:⁷⁹
- 1.71 [**%**].⁸⁰
- 1.72 [%].⁸¹ [%].⁸² [%].⁸³
- 1.73 [%].84
- 1.74 [%].⁸⁵ [%].⁸⁶ [%].⁸⁷
- 1.75 We have also found an instance of a clause that [%].88

Uninstallation clauses under the RSAs

1.76 Our review of RSAs for OEMs representing a large majority of UK Android users has not identified any clauses that require OEMs to prevent users from uninstalling Chrome.⁸⁹

Summary of analysis of Google's PAs and RSAs with OEMs in relation to mobile browsers

1.77 We have considered PAs and RSAs made between Google and OEMs detailed in 'Section 8: The role of choice architecture in mobile browsers' and in this appendix and found that these agreements are prevalent across Android OEMs. Our

```
75 [≫].
76 [≫].
77 [≫] submission to the CMA [≫].
78 [≫].
79 [≫].
80 [≫].
81 [≫].
82 [≫].
83 [≫] response to the CMA's information request [≫].
84 [≫].
85 [≫].
86 [≫] submission to the CMA [≫].
87 [≫].
88 [≫].
```

- analysis covers the majority of the Android market in the UK. All OEMs that form a part of our analysis have both a PAs and RSAs in place with Google.
- 1.78 The dependencies between PAs, RSAs and other agreements (such as the EMADA and compatibility requirements) means that OEMs enter into a suite of related agreements that make Google applications and services prominent across the choice architecture of the Android ecosystem.
- 1.79 EMADA and compatibility requirements gives Google oversight of new Android models, with Google stating that compliance with the terms of agreements is conducted through review of software builds for new devices, which Google reviews and approves for launch.⁹⁰
- 1.80 While some OEMs suggest that the certain terms in relation to choice architecture such as pre-installations, placement and defaults mandated in these agreements can serve to improve the user experience, it is also the case that OEMs receive substantial financial incentives to fulfil the terms of these agreements.
- 1.81 Those financial incentives may allow OEMs to reduce their costs and, therefore, reduce device costs for consumers in the short term. However, there are also relevant considerations concerning the effect that such financial incentives have on OEMs:
 - (a) to consider third-party browser vendors for pre-installation on their devices; and
 - (b) for OEMs that also provide their own browser, to develop a competitive first-party browser app on the same device on which Chrome is pre-installed.
- 1.82 Furthermore, third party browser vendors may face barriers relating to:
 - (a) the opportunity to develop similar agreements with OEMs; and
 - (b) the effects that the current choice architecture on Android devices out-of-thebox has on consumer choice, and the ability of browser vendors to access new users and provide a quality user experience.
- Overall, through the PAs and RSAs in relation to Chrome, Google has considerable influence over the choice architecture on Android devices and this leads to Chrome being pre-installed, prominently placed and, in some cases, set as default on Android devices in factory settings, as detailed in 'Section 8: The role of choice architecture in mobile browsers'.

⁹⁰ Google's submission to the CMA dated 23 October 2024.