Google's Response to Working Paper #3:
Access to Browser Functionalities Within the iOS and Android Mobile Ecosystems

31 July 2024

Introduction & Summary

1. Google welcomes the opportunity to respond to the CMA's Working Paper on access to browser functionalities on iOS and Android (**WP3**).

2. Google provides browser developers with the resources and tools they need to compete effectively on Android. The evidence set out in WP3 supports this view. In contrast to the long list of functionalities reserved for Safari on iOS cited in WP3,[1] functionality that Chrome uses to develop features on Android can generally be implemented by any third-party browser. Of the small number of potential issues that third parties have brought to the CMA's attention relating to Android,[2] the majority of these functionalities are already available or not restricted to third-party browsers.

3. In this response, we demonstrate that lack of access to functionality by third-party browsers in the Android ecosystem cannot plausibly give rise to an adverse effect in competition (**AEC**). In particular:

    - **Section I** explains that third-party browsers have access to all necessary functionality to compete on Android.
    - **Section II** addresses the small number of potential issues raised in WP3.
    - **Section III** explains that third-party browsers can already support extensions on Android, if they choose to do so.

I. Third Party Browsers Have Access to All Necessary Functionalities To Compete on Android

4. Features and functionality are an important way for browsers to innovate and attract users. As WP3 outlines, they can contribute to innovations in the user interface, improve security and privacy, and increase information availability for browser vendors.[3] On Android, third-party browsers have access to all relevant functionalities needed to build these features:

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1 WP3, ¶¶3.6 - 3.59.

2 WP3, ¶¶4.6 -4.15.

3 WP3, ¶¶2.2 - 2.10.

- The open source nature of Android, Chromium, and Blink means that Android features available to Chrome in this software are generally available to any browser vendor. Chrome uses open source code to develop and test most features.

- Google encourages third parties to submit requests or complaints, file bugs, and generally identify any issues. Google engages with third-party browsers requesting access to any additional APIs or other functionality on Android.

- Following a detailed year-long investigation, the CMA concluded in its Mobile Ecosystems Market Study that it had "*not identified examples where there would be material benefits should Google be required provide to [sic] additional functionality to third-party browsers or browser engines.*"[4]

- Samsung and Brave told the CMA that there are "*no major features that are available on Chrome which are not available to their own browsers on Android.*"[5]

5. WP3 does not suggest that there has been any change in this position.

II. The Issues Raised in WP3 With Respect to Android Do Not Give Rise to an AEC

6. Google does not have a policy of restricting functionalities for third-party browsers without legitimate justification. This would go against Android's open nature and our commitment to promoting the entire web ecosystem.

7. Of the few concerns about Android listed in WP3,[6] two are misconstrued as the relevant functionalities are already available to third-party browsers, and the remainder have either already been made available or are in the process of being made available, as is explained in more detail below.

8. **No "key processes" are reserved for Chrome**. Yandex submitted that "*Chrome uses different mechanisms for creating key processes*" leading to "*Chrome creating processes much faster and loading web pages faster than any other browser.*"[7] Google has been unable to identify any such processes. One potential functionality this submission could refer to is the Android functionality used to launch renderer processes more efficiently. This functionality uses public Android APIs that are not restricted in any way. Any third-party browser can access this functionality: the code used by Chrome to make use of this functionality resides in Chromium so is available already to any Chromium-based browser.

9. **No restriction of access to one-click logins for third-party browsers**. Opera submitted that "*Chrome's one-click login experience to the Google account*

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4 Mobile Ecosystems Market Study Final Report, ¶8.132.

5 Mobile Ecosystems Market Study Final Report, ¶5.113.

6 WP3, ¶¶4.6-19.

7 WP3, ¶4.17.

associated with the device provides Chrome with an advantage over rival browsers."[8] While Chrome and other Google apps can benefit from a one-click login experience to the Google account associated with the device, to create an efficient user experience, third-party browsers (including Opera) are not restricted from using equivalent single-sign on processes with their own first party apps. For example, Microsoft Edge offers single-sign on for Microsoft accounts to users. Third-party browsers and other applications can also use "Sign-in with Google" which enables users to sign into their Google account on other apps. Whether a browser supports Sign-in with Google is up to the browser vendor.

10. **Any browser can build Read Aloud functionality or use Read Aloud features offered by third parties**. Brave submitted that Chrome's Read Aloud feature, which converts web page text to audio, is not available to third parties.[9] This innovation is proprietary and part of Chrome's competitive offering. It relies on connections to Google's servers, and is not part of the open source Chromium engine. Any browser that wishes to build their own Read Aloud feature is able to do so. For example, Edge has supported a Read Aloud feature on Android since 2021.[10]

11. Further, users can benefit from Read Aloud features offered by various third parties which can be used with any browser on Android, including OEMs (*e.g.*, Samsung's "text-to-speech" feature[11]) and apps that offer Read Aloud features,[12] that can read text in any mobile browser aloud.

12. **No restriction of access to biometric authentication on Android**. Yandex submitted that Google "*can prevent other browsers from utilising*" authorisation on websites via biometrics.[13] Google does not restrict access to biometric authentication for third-party browsers on Android. Google recently amended its approach to biometric authentication on websites. Previously, a list of applications (including browsers) that were trusted to authenticate users was built into Google Play Services, with it being open to all browsers to make a request to be added. Since Android 14 (released October 2023), each authenticator application makes its own decision on what other applications to trust to request biometric authentication for any website. Google's own authenticator in Google Play Services maintains a public list[14] and accepts requests for additions as documented publicly.[15]

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8 WP3, ¶4.10.

9 WP3, ¶4.13.

10 Lexdis, PDF reader in Microsoft Edge and Immersive Reader goes mobile.

11 Fineshare, How Samsung Text to Speech Tool Can Improve Your Experience.

12 TechRadar, Best speech-to-text app of 2024.

13 WP3, ¶4.14.

14 *See* https://www.gstatic.com/gpm-passkeys-privileged-apps/apps.json.

15 *See* Android for Developers, Make credential manager calls on behalf of other parties.

13. **WebAPK minting is not competitively significant**. Third parties submitted that Chrome can use an API to create WebAPKs and that this is not available to third-party browsers, preventing them "*from offering competitively relevant features around the installation of web apps*."[16] Access to WebAPK minting does not, however, have a significant impact on a browser's ability to compete. It is not "*essential for installing PWAs*" as WP3 suggests.[17]

    - ***Progressive web apps (PWAs) installed through third-party browsers have the competitively significant functions needed to compete***. Any PWA, whether installed on Chrome or a third-party browser appears on the home screen as a bookmark, can send notifications, and can be updated after installation.

    - ***Other app store services are able to offer similar "minting" functionalities that they can make available to browsers***. Samsung's Galaxy Store, for example, makes similar functionality available to Samsung Internet. Third-party browsers could also work with Samsung if they viewed this functionality as sufficiently important.

14. [*Confidential*].

15. **Third-party browsers have access to the same Google Search experience as Chrome**. Mozilla submitted that "*Google Search on Chrome for Android was different from the search experience that was available to Firefox on Android*" which was a "*web compatibility issue*" that resulted in Firefox showing "*less information*."[18] [*Confidential*].

16. [*Confidential*] Google and Firefox worked to ensure that Firefox sends the relevant signals, and Google was able to promptly implement the relevant changes. Importantly, the delay had no impact on its ability to attract users, as the [*Confidential*].

III. Browsers on Android Are Free to Offer Extensions

17. The Working Paper notes there are limited offerings of browser extensions on Android, which "*may be an outcome of the limited competition between browsers on iOS and between browsers on Android*."[19] However, there is no restriction of browser extensions on Android, unlike on iOS, as acknowledged by the Working Paper.[20] Third-party browsers on Android are able to compete by providing browser extensions to users, to meet their users' needs, if they wish. For example, Firefox

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16 WP3, ¶4.6.

17 WP3, ¶¶3.6-3.59.

18 WP3, ¶4.8.

19 WP3, ¶5.12.

20 WP3, ¶5.5.

and Edge support browser extensions on Android. Google is aware of at least 1,291 browser extensions offered by Firefox on Android.[21]

18. To date Chrome has not prioritised the development of browser extensions on mobile, as it has not viewed these as an important feature for mobile browsers. [*Confidential*].[22] This does not and cannot, however, prevent, restrict, or distort competition between browsers on Android as other browsers are free to innovate and differentiate themselves through offering new features, whether as part of their browser or by facilitating browser extensions, as Firefox and Edge have already done.

19. As with other features or functionalities, Chrome continually reviews user and developer feedback to evaluate whether to offer browser extensions in the future. Importantly, Android allows other browser vendors who choose to do so, like Firefox and Edge, to compete on this differentiation.

Conclusion

20. All browsers on Android have access to the functionality they need to compete effectively. This is reflected in WP3's emerging thinking that "*Google engages in self-preferencing less, in respect of access to functionalities on Android compared to Apple's approach on iOS*."[23] The difference in evidence available of restrictions of functionality on iOS in comparison to on Android supports this view. In contrast to the 30 issues identified on iOS, third parties have only identified six in relation to Android. Of these six issues, five have been resolved or are not features that are restricted to third parties. The remaining issue does not restrict third-party browsers' ability to compete and, in any event, is being resolved. Accordingly, there is no AEC on Android resulting from browsers' lack of access to functionalities that Chrome has access to.

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21 Firefox Browser, Add-ons.

22 [*Confidential*].

23 WP3, ¶4.18.