

Competition and Markets Authority: Consultation on its Interim Report on the Mobile Ecosystem Market Study

Response from Mobile UK

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About Mobile UK

1. Mobile UK is the trade association for the UK's Mobile Network Operators (MNO) – EE, Virgin Media O2, Three and Vodafone. Our goal is to realise the power of mobile to improve the lives of our customers and the prosperity of the UK.
2. As mobile increasingly becomes the device of choice for running daily life both at home and at work, customers want improved coverage and greater capacity. Mobile UK's role is to identify the barriers to progress and work with all relevant parties to bring about change, be they Government, regulators, industry, consumers, or citizens more generally.

Introduction

3. Mobile UK welcomes the opportunity to respond to the Competition and Markets Authority's ("CMA") interim report on its mobile ecosystem market study. The mobile ecosystem, as defined by the CMA's study to include mobile operating systems, browsers, and app stores, has important links with the wider mobile value chain, some of which should be considered as part of the CMA's market study.
4. The Interim Report refers to concerns that Microsoft has raised concerning Apple's [iCloud] Private Relay ("Private Relay"). In this response, we expand on issues relating to Private Relay, its potential for negative impacts on consumer experience, internet safety and the risks to the wider mobile ecosystem arising from Apple being able to leverage its considerable market power into many areas of the market and thus being able to entrench its position further.
5. The CMA's market study must therefore consider the impact of Private Relay on consumers and the market more generally and assess whether its introduction further entrenches the market position of Apple. If so, the CMA should assess how regulation can prevent harm to consumers, including through the application of a Code of Conduct or pro-competition interventions for firms identified with strategic market status ("SMS") by the mobile ecosystem market study.
6. Private Relay is one example of new technology or service that may be introduced by SMS firms in the coming years, potentially after any Code of Conduct is implemented. The CMA or the Digital Markets Unit should set out guidance on how such new technologies would be reviewed under the regime and the process for how its Code of Conduct and pro-competition interventions would be updated if appropriate.

Summary of Conclusions

7. We welcome the CMA's market study on the mobile ecosystem and its findings in the interim report, which sets out a range of remedies that could make the mobile ecosystem more competitive. Private Relay is another technology that affects competition in mobile browsers, and the CMA should assess its impact before publishing its final report.
8. Private Relay affects Apple users in many ways, beyond simply what level of privacy a user wants. The CMA should assess whether it is appropriate for Apple to control the terms of service over

their mobile browsers at the expense of 3rd parties who provide a range of valuable services to consumers based on the web traffic data that Private Relay encrypts.

9. In this submission, we have proposed some additional remedies the CMA should consider in its market study, including preventing Apple from making Private Relay a default-on service. We would welcome the opportunity to meet with the CMA to discuss the impact of Private Relay and are ready to answer any follow-up questions.

What is Apple Private Relay?

10. Apple launched its Private Relay service in 2021, offering encryption for Apple device users with a paid-for iCloud+ subscription. The iOS15 Apple operating system invites users to choose Apple/iCloud Private Relay from the iCloud+ operating system settings. Turning on this function *"hides your IP address and browsing activity in Safari and protects your unencrypted internet traffic so that no one – including Apple – can see who you are or what sites you are visiting"*. Apple achieves the privacy relay by directing the user's browser enquiry from Safari, away from the user's ISP DNS services directly to the Apple iCloud servers. Apple iCloud then directs the user's internet search to a content distribution network ("CDN").
11. Apple/iCloud Private Relay sends the user through a suite of Apple products: the Apple operating system, the Apple browser and the Apple iCloud from which Apple orchestrates access to the internet. Apple unilaterally terminates the role of the mobile and fixed connectivity provider in resolving the internet connection, with Apple itself taking over the role of the ISP. The mobile and fixed connectivity providers role is reduced to providing conveyance from the handset/home to the Apple iCloud platform.
12. When switched on, Private Relay prevents network providers from seeing inside the network traffic from Safari browser and unencrypted applications.
13. On using a Safari browser, resolving a domain name and/or using an unencrypted application, Private Relay diverts a user's request via two Apple-chosen servers.¹ The first server takes the user's Internet Protocol (IP) address and anonymises it; the second server operated by a CDN uses that anonymous IP address and serves the requested content. No one party can link the user to the requested content.
14. Private Relay is currently default-off, but it is already being used by many Apple customers in the UK, despite being in Beta mode. Apple may switch the service to being default-on later in 2022. With Apple handsets now making up over 50% of the UK market, a default-on position would thus impact the majority of UK mobile users and further entrench Apple's SMS position.

Impact of Apple Private Relay on the mobile ecosystem

15. Whilst Apple claims Private Relay enhances the privacy of its users, there are a range of other implications to consumers and the mobile ecosystem, including:
 - a. **Customers are directed to more Apple services**, accessing the internet curated by Apple. Apple is inserting itself into the role of ISP without incurring any of the obligations (such as Net Neutrality) that exist. Thus, Apple could leverage its position in the device and operating system to grow its iCloud+ user base and develop its position as an ISP.
 - b. **Competition** between ISPs in the UK (fixed and mobile) is intense; Private Relay will diminish the role of the ISP and undermine their ability to differentiate and compete in the market on fair terms.

¹ For Apple's description of its Private Relay service, see here: [About iCloud Private Relay – Apple Support \(UK\)](#)

- c. **Online harms:** Private Relay encrypts traffic over the Safari browser, compromising the content filtering, malware, anti-scamming and phishing protection provided by network providers.
 - d. **National security:** By preventing network providers and Apple from accessing information on traffic encrypted by the service, Private Relay impairs the insights available under the Government's investigatory powers, with implications for law enforcement, impacting our ability to assist with harm reduction to consumers and the UK (covering terrorism, serious organised crime, child sexual abuse and exploitation).
 - e. **Network performance and security:** The traffic information over Safari allows network providers to understand demand patterns across mobile networks. Losing this information could compromise future network optimisation and investment prioritisation.
 - f. **User experience:** There are reports that Apple users have suffered a worse browsing experience when using Private Relay.² As a result, Apple may benefit from the migration of certain traffic away from the Safari browser to apps downloaded from the App Store, where Apple can earn a commission.
 - g. **Customer experience:** Private Relay may reduce the ability to diagnose customer issues (due to loss of network data insights) and bill shock, where the customer expects zero-rated traffic types (such as, when launched, emergency calls over video relay) and content, for example bundling of gaming/sporting content and government Covid sites/applications.
 - h. **Future innovation:** By losing access to web traffic information on Apple devices, network providers have less ability to develop new services based on customer insight from web traffic. For example, network providers' innovations in security solutions often use insight from web traffic information.
16. Mobile UK is very concerned that consumers are not fully informed about how Private Relay works or understand the full implications of invoking the services. Customers think the service makes everything private and harder to intercept/hack. Most do not realise that all traffic is now shipped through Apple, which controls the user experience. This may stop other helpful features from working and add latency and jitter to time-sensitive applications due to everything funnelling through iCloud. It could thus harm new edge applications, just as edge applications are starting to take off.
17. Therefore, the impact of Private Relay is multi-dimensional and cannot be assessed solely through a privacy lens.

Private Relay could further entrench Apple's market position

18. In its interim report, the CMA found that Apple has significant market power concerning the supply of its mobile browser and browser engine.³ The CMA also found that Apple is likely to meet the proposed criteria for SMS based on its mobile browser being a 'digital' activity that gives it substantial and entrenched market power and a strategic position.
19. The CMA's assessment of SMS included an analysis of Apple's high and stable share of supply of browsers across all mobile devices in the UK.⁴ The CMA found limited constraints from other browsers because rival browsers cannot differentiate themselves easily due to limitations on what browser engine they can use on Apple devices.⁵ The CMA also noted that Safari is the only

² [Apple's Private Relay Service Creates Challenges for UK ISPs - ISPreview UK](#)

³ [Mobile ecosystems: Interim report \(publishing.service.gov.uk\)](#), paragraph 5.232, p253.

⁴ Ibid., paragraph 8.53, p411.

⁵ Ibid., paragraph 8.54, p411.

pre-installed browser on Apple devices, which acts as a barrier to rival browsers gaining users.

20. The CMA also found Apple's position in mobile browsers is 'strategic' because of a high proportion of web traffic accessed through Safari and the importance of web browsers acting as a gateway to allow users to access content.⁶ Apple's control over the WebKit browser engine allows it to determine the rules for how rival browsers operate on an Apple device, effectively limiting differentiation against Safari.
21. The CMA's analysis of Apple's SMS position remains appropriate in light of Private Relay. The introduction of Private Relay will not affect consumers' ability to switch to an alternative mobile browser, as the ability of rival browsers to differentiate themselves from Safari will still be limited by the terms of Apple's browser engine. Equally, Apple will continue to have the ability to pre-load its devices with Safari, giving it an advantage over other browsers, particularly if the Private Relay feature is 'sold' on the basis that (falsely in our view) that the consumer experience is enhanced, where Apple defines the consumer experience only through the lens of privacy.
22. Similarly, users of Apple devices are likely to remain within the Apple ecosystem, particularly if Private Relay is provided as a default-on option. The CMA's analysis in its interim report showed that rates of consumer switching between the Apple and Google mobile ecosystems are very low because of high actual and perceived barriers to switching.⁷ These barriers will remain unchanged with Private Relay.
23. Indeed, Private Relay could improve Apple's position in the supply of mobile browsers. Since the technology prevents network providers from accessing data about web traffic through the Safari browser, network providers will be unable to use the traffic data to develop their own competing mobile browsers in future. Alternatively, network providers will not be able to strike commercial deals with 3rd party mobile browser suppliers, who may value the data highly to enhance their own mobile browsers on the Apple device. As a result, Apple may face even lower competitive constraints from rival mobile browsers.
24. Private Relay is, therefore, an additional feature that both entrenches Apple's position in the supply of mobile browsers and leverages its market power into the ISP market. Apple sends Safari traffic to iCloud and then onward to the internet it has configured using its preferred suppliers. Mobile operators are no longer the ISP to Private Relay customers. The Net Neutrality rules prevent ISPs from interfering with traffic traversing their networks, especially commercial intent. No such rules apply to Apple, which can, by routing traffic in this way, favour its own proprietary applications and service at the expense of other providers.
25. The CMA should reflect this impact of Private Relay in its analysis of market power when preparing its final report for the market study.

Private Relay could harm consumers, including through its impact on competition

26. Private Relay has a range of implications for consumers through the impact on network providers of not seeing the traffic data on the Safari browser. As described above, these include potential online harms, compromised national security, poor network performance and customer experience, and loss of future innovation.
27. The impact of a loss of innovation has implications for competition in digital markets, including in the markets in which Apple operates. We have already described above how the inability to view web traffic over Safari means network providers or other 3rd parties might not be able to create

⁶ Ibid., paragraph 8.57-8.60, p412-413.

⁷ Ibid., paragraph 3.189, p122.

or enhance mobile browsers that compete with Safari. As a result of facing less competitive pressure, Apple may face less pressure to improve its mobile browser. This could worsen the user experience compared to the counterfactual of greater innovation by multiple web browsers that compete on a level playing field.

28. There may also be impacts on competition in adjacent digital markets. Network providers would no longer be able to use web traffic data over Safari to develop their own digital products and services that compete directly with Apple. For example, a network provider may no longer have access to information about a user's content viewing habits to develop their own content that competes with Apple TV. Similarly, a network provider may no longer be able to share consumer insight with 3rd parties that provide digital advertising services in competition with Apple Search Ads, Apple's digital advertising service for its App Store. This creates a significant risk that Apple could establish entrenched market power in adjacent activities, such as TV content and digital advertising.
29. The CMA's market study should consider all the implications of Private Relay for competition and the impact on consumers, both in mobile browsers and other adjacent digital activities.

The proposed *ex-ante* regulatory regime for SMS firms could mitigate some of these harms

30. The CMA is considering a range of different interventions to improve competition in the supply of mobile browsers. These include remedies to make switching between browsers easier, remedies to increase interoperability of browsers and remedies to address the ability to exercise market power in browsers.⁸
31. Whilst the CMA's proposed remedies attempt to reduce Apple's market power in browsers, they do not address the effects of market power, where Apple uses its operating system to offer or implement browser services such as Private Relay. Private Relay reduces the ability of network providers or other 3rd parties to create services that compete with Apple, including developing rival browsers to Safari.
32. The CMA should apply a remedy that limits the use of Private Relay, or at the very least, prevents Apple from making it a default-on service. Consumers should not be subject to a default-on service that compromises the ability of their network provider to provide valuable additional services (e.g. parental controls, security solutions). Similar to the CMA's analysis of how pre-loading a device with Safari creates barriers for rival browsers, making Private Relay a default-on service also creates barriers for network providers and 3rd parties to develop a competing browser and other services.
33. The CMA should prevent Apple from linking products from market areas in which it is dominant. Private Relay should not be presented as a set up option or installed as a default-on service. It should be made available as an app to compete with similar services such as VPNs. Apple should notify relevant 3rd parties in advance when introducing Private Relay services so that 3rd parties can inform their customers of how their service may change were Private Relay to be used. For example, advance warning of the introduction of Private Relay would have allowed network providers to inform customers how their security solutions may change and also inform the Government how it changes their investigatory powers insight from network traffic data.
34. The ex-ante regulatory regime for SMS firms provides a route for our recommended interventions to be applied. Requirements for Apple to provide a neutral choice screen for browsers would be a pro-competition intervention and preventing Apple from making Private Relay a default-on

⁸ Ibid., paragraph 7.63, p376.

service could be embedded into the Code of Conduct.