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Sent: 01 February 2022 10:53
To: Mobile Ecosystems
Subject: In response to Competition and Markets Authority's Mobile Ecosystems Market Study

In response to Competition and Markets Authority's Mobile Ecosystems Market Study.

I am a Front End Web Developer resident in the UK, working for the London-based web agency Series Eight. This response is my personal concerns and comments rather than an official organisation position. Series Eight is a website design and development agency that builds award-winning eCommerce and marketing websites for companies and brands within the UK. As a web developer at Series Eight I work with browsers and websites extensively and my comments come from my experience developing a large number of websites and web apps.

Due to my position working on websites, my specific concerns relate to the lack of competition in browser engines on iOS enforced by Apple App Store policies. I agree with the findings of the Mobile Ecosystems Market Study in this area, particularly in regards to the monopoly Safari holds on iOS impacting browser and web app quality. Safari is a capable browser, but with no competition in browser engine this results in iOS web capabilities lagging significantly behind other platforms and what developers require.

Although we build for all modern browsers, a significant amount of time in site development is spent catering for and fixing bugs specifically caused by Safari on iOS. Every client we build a site for will pay for roughly 1 week of full-time work in testing and bugfixing, and generally about 75-80% of this is spent on iOS web bugs. The current state of Safari directly costs Series Eight time and money for every project, exacerbated by the poor documentation, update logs and private bugfix boards for Safari. The lack of engine diversity means Safari does not have to prioritise fixing bugs and addressing issues developers have.

The lack of "Progressive Web App" (PWA) features on iOS—designed to force the use of native apps over web apps—also impacts us significantly. More specialised agencies do not have the money and resources to invest in the huge costs of native app development, meaning when a client requires an 'app like' experience we cannot offer it affordably. Were Apple devices to have PWA functionality on the level of Windows or Android then we could use web apps where possible to provide these services. The lack of many of these features costs us business and limits the scope of the market we can offer.

Specific missing features/bugs/safari functionality that cause us issue:

- Instability in the layout engine requires 'one off' hacks to make sites work with Safari that work elsewhere;
- The purging of PWA data, missing PWA APIs including share target and lack of PWA 'Install' prompt mean making competitive web apps is impossible in iOS;
- Critical bugs in IndexedDB breaking web apps and websites on new releases;
- The slow update cycle of Safari preventing bugfixes and security fixes being distributed in any reasonable time;
- Missing 'accessibility features' like focus-visible providing a worse experience for those with disabilities compared to alternative engines/browsers.

I agree with the assessment that there does not seem to be evidence of the Safari monopoly protecting the security of iOS devices. I would argue a step further however—recently it has become clear that Safari does not have the same level of security as provided by other engines and browsers. As demonstrated by a recent bug in IndexedDB allowing personal data to be harvested by malicious sites (<https://www.theverge.com/2022/1/16/22886809/safari-15-bug-leak-browsing-history-personal-information>), the monopoly of WebKit/Safari on iOS can provide a significant security risk to users, not a protection. In this instance it took almost 2 months for this bug to be fixed and distributed to users, and meanwhile the users of Chrome, Firefox and other browsers on iOS were also vulnerable. In an environment with engine

diversity, users could have switched from Safari to an alternative browser in the meantime to stay safe online.

It is for this reason I believe that for Remedy Area 3, “require Apple to allow web app developers greater interoperability with its mobile ecosystem” is not a satisfactory solution. This solution would still force users to be susceptible to the Safari and WebKit projects, at the potential cost of bugs and security issues. The only real solution would be to require third-party browsers and engines on Apple as standard, allowing users to make meaningful choices in browser.

In all instances of browser capabilities within Remedy Area 3 I think the best remedy is complete browser and engine freedom, and agree with the assessment that a users default browser should be respected in all instances. All browsers should also have access to the same APIs and capabilities, an issue primarily aimed at Apple devices but also Google Chrome on Android. The opening up of PWA APIs as an alternative to native apps would allow for greater competition, increased quality of apps, reduce the time and money spent on app development for small businesses and give more user freedom.

I am less experienced in the areas of Operating Systems and native apps, however the findings made by the Study reflect my own experiences and views on how I see these markets. The remedies proposed seem reasonable and solve the problems detailed within the mobile ecosystem.

As my comments are not representing the organisation I work for I am an individual in this instance. I would like my response to be attributed to me by name.

Regards,
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Front End Developer at SeriesEight

(he/him)