



Feedback on Digital Markets Competition regime
guidance

The significance of Free Software
for fairer digital markets

Free Software Foundation Europe
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Executive summary

This report presents the Free Software Foundation Europe's (FSFE) on the newly enacted [Digital Markets, Competition and Consumers Act](#) (DMCCA) and its guidance regime. In particular, this report highlights the significant role of Free Software (also known as Open Source Software - FOSS) projects in promoting competition and innovation in digital markets.

This reports presents examples of compliance pitfalls in relation to the EU's Digital Markets Act (DMA) and the negative impact on Free Software: (i) Apple's restrictions on software freedom and interoperability serve as concrete examples of barriers for Free Software developers seeking access to iOS devices. The undertaking's terms and conditions unduly limit consumer choice, stifle fair competition and hinder innovation under the DMA. (ii) The report also notes how GNU Taler - a Free Software payment provider - faces challenges in anti-competitive environments created by Apple. As takeaways of the listed examples, the report underscores the importance of fostering a competitive environment that is fair to open technologies. Free Software offers diverse and innovative solutions which have the potential to offer viable alternatives to the dominance of major players. Consumer welfare is enhanced by the variety of choices enabling them to bypass gatekeepers.

In conclusion, the FSFE advocates for regulatory measures that lower barriers to entry, promote interoperability, and support the growth of Free Software. Such measures are essential for ensuring a fair and competitive digital marketplace that benefits consumers and encourages continuous innovation.

Introduction

The FSFE deeply appreciates the opportunity to present its opinion to the Competition and Markets Authority (CMA) of the United Kingdom on the newly enacted Digital Markets, Competition and Consumers Act (DMCCA) and its guidance regime.

With over 20 years of expertise in digital markets, the FSFE has been actively involved in policy and legal work, collaborating with legislators, executive bodies, competition and telecommunication regulators across Europe. Our work has focused on digital devices and Free Software, making us well-positioned to provide insights into the implications of the DMCCA.

The dominant power of corporations over digital devices has sparked policy, regulatory, and legal reactions trying to impose accountability on such large enterprises controlling how end-users should use their equipment. In the EU, the DMA addresses companies exercising control over whole platform ecosystems in the digital economy and are structurally extremely difficult to challenge or contest by existing or new market operators, irrespective of how innovative and efficient those market operators may be. Similarly, we welcome the DMCCA which aims to regulate competition in digital markets introducing the concept of undertakings with strategic market status (SMS) to ensure fair competition and protect consumer rights. By fostering a competitive digital market landscape, the act seeks to promote innovation, consumer choice, and economic growth.

The purpose of this report is to highlight the significant role of Free Software¹ projects in promoting competition and innovation in digital markets. This report presents examples of compliance pitfalls in relation to the EU's Digital Markets Act (DMA) and the negative impact on Free Software: (i) Apple's restrictions to software freedom and interoperability serve as concrete examples of barriers for Free Software developers seeking access to iOS devices. The undertaking's terms and conditions unduly limit consumer choice, stifle fair competition and hinder innovation under the DMA. (ii) The report also notes how GNU Taler - a Free Software payment provider - faces challenges in anti-competitive environments created by Apple. As takeaways of the listed examples, the report underscores the importance of fostering a competitive environment that is fair to open technologies. Free Software offers diverse and innovative solutions which have the potential to offer viable alternatives to the dominance of major players. Consumer welfare is enhanced by the variety of choices enabling them to bypass gatekeepers.

In conclusion, the FSFE advocates for regulatory measures that lower barriers to entry, promote interoperability, and support the growth of Free Software. Such measures are essential for ensuring a fair and competitive digital marketplace that benefits consumers and encourages continuous innovation.

¹ Free Software refers to [four freedoms of software](#): use, study, share and improve the software.

Free Software for fairer digital markets

The FSFE argues that Free Software represents a viable and fairer alternative to proprietary-dominated environments that lead to monopolisation and restriction to consumer choice, specially in mobile ecosystems. Free Software operating systems, browsers, app stores, messaging platforms and other key aspects of mobile devices play a crucial role in promoting fair competition. By engaging with Free Software developers and projects, we aim to shape a regulatory framework that supports the growth and sustainability of these vital projects, ensuring a fair and competitive digital markets promoting:

- **Innovation and diversity:** Free Software fosters innovation in collaborative environments, offering alternative solutions to monopolistic commercial practices over devices. Free Software encourages a culture of creativity and experimentation;
- **Consumer choice:** Free Software provides consumers with alternatives to mainstream proprietary software, ensuring that users are not locked into a single vendor's ecosystem. This choice is critical for fostering competitive and contestable markets;
- **Community and collaboration:** Free Software is essentially community-driven, benefiting from a collaborative spirit and a culture of sharing knowledge. Such development model presents strategic advantages in comparison with proprietary mindset, leading to rapid problem-solving and continuous improvement of software;
- **Transparency and security:** The open nature of Free Software development allows for greater transparency, enabling users to inspect and verify the software's security features. This is especially important in an era where cybersecurity is paramount to human rights and consumer protection.

Case study: DMA, Apple as gatekeeper and Free Software

The EU's DMA seeks to protect fairness and contestability of digital markets by setting rules for "gatekeepers". The law includes several provisions [directly impacting Free Software](#). It mandates gatekeepers to allow installing of software (sideloading), to enable alternative app stores and repositories to be used in devices, and several interoperability obligations, allowing third party developers to access the same hardware functions as the gatekeepers.

Apple was [designated as a gatekeeper](#) in September 2023 and presented a strategy for complying with the DMA in February, 2024. However, already since March 2024, the European Commission (EC) has [been investigating Apple for non-compliance with the DMA](#).

Following a series of interventions, in order to assist the DMA enforcement procedures, the [FSFE has been highlighting](#) the main problematic aspects of Apple in relation to Free Software. In particular:

1. **Barriers to software freedom:** By blocking side-loading of apps and the unfettered installation of alternative app stores, Apple is violating Art.6(4). Concretely, paragraph 4 obliges the gatekeeper to provide users with the possibility to easily install apps from other sources than the gatekeeper's own software application store. Recital (41) clarifies that the gatekeeper is prohibited from undermining or restricting that possibility in any way.
2. **Vendor lock-in against interoperability:** By hampering effective interoperability with of hardware functions, the undertaking is violating Art. 6(7) of the DMA. Apple has introduced an opaque and non-accountable system to grant interoperability that impedes Free Software projects to effectively access hardware and software functions of devices. The DMA prescribes the opposite: interoperability should be granted free of charge and effectively, so third parties can enjoy the same privileged access to hardware and software as the gatekeepers.

1. Barriers to software freedom

Apple is able to impose barriers to software freedom due to its monopolistic control over devices. The undertaking imposes on Free Software developers several barriers to entry iOS ecosystems.

For instance, Apple's "notarization" maintains substantial control over software distribution on its platforms. This is achieved by implementing encryption-based DRM on software distributed in iOS and iPadOS. Apple's notarization process involves a complete security and policy review of apps, which are then re-signed and encrypted with proprietary DRM. Apple's notarization process requires developers to submit their apps for security checks before distribution. This process, intended to protect the operating system from unauthorized access, creates significant barriers for smaller developers and alternative app stores. Such notarization restricts the ability of alternative app stores to operate independently and reduces the diversity of available apps. Apple's additional layer of control over distribution can delay the release of new apps and updates, hindering rapid innovation and deployment of new features or security patches.

Moreover, Apple's policies on side-loading prevent users from installing apps from sources other than the Apple App Store. These restrictions limit consumer choice and hinder the ability of alternative app stores and independent developers to compete. Consumers are forced to rely solely on Apple's App Store, where Apple controls the pricing, distribution, and availability of apps. This monopolistic control stifles innovation and competition, as developers are constrained by Apple's policies and fees.

2. Vendor lock-in against interoperability

The DMCCA introduces new interoperability rules in [section 20](#) and also in its main objectives of fair dealing and open choices as per [section 19](#). These rules, as outlined in the DMCCA, aim to promote interoperability and freedom of choice for users. Interoperability is an established concept under the [European directive for electronic communications](#), enhancing consumer protection as per [Art. 38 of the EU Charter](#). Achieving these goals necessitates restricting strategic market status players' dominant positions and mandating interoperable standards.

However, [Apple has been publicly arguing](#) that third-party app stores and apps compromise the integrity and security of its iOS operating system. Despite these claims, Apple's macOS does not impose similar restrictions on software distribution, allowing developers to sell their products directly to users without compromising security. This means that there is a discrepancy in relation to Mac users, revealing that Apple's terms and conditions regarding the iPhone are far more restrictive.

The concept of integrity, as interpreted in the EU's case law of [Microsoft vs. the Commission](#), refers to protective design options against unauthorized access. Apple claims that retaining tight control over its ecosystem is vital for maintaining the integrity of iOS. However, this argument is questionable, as iOS can function seamlessly with third-party app stores and apps. By blocking third-party app stores and side-loading, Apple limits user choice and access to alternative software distribution channels, which does not necessarily enhance or protect the integrity of iOS but rather restricts user freedom.

Box 1. Interoperability for alternative payment systems: The case of GNU Taler

[GNU Taler](#) is a Free Software advanced electronic payment system provider. The system lets users pay just as easy and anonymously as users were to pay with cash. Unlike with vendor solutions like Apple Pay, Google Pay or Alipay, there is no vendor looking over user's shoulder with every payment made. GNU Taler works as an Android app, browser based web extension and now also on [iOS devices](#).

GNU Taler is a direct competitor to [Apple Pay](#) on iOS. In order to hinder competition and to self-preference its own payment service, Apple is forcing other iOS app developers/providers to stick to choose only one payment provider. Either Apple pay or the alternative but not both together. This way, the other developers will naturally choose Apple pay due to its high user base. This is directly hindering the potential success of GNU Taler as a viable/legit payment service provider on iOS. GNU Taler can only be considered for inclusion as a payment system for in-app payments if software developers are allowed to offer both Apple Pay and alternative payment providers, giving the end user the freedom to choose their preferred payment system.

Furthermore, Apple pay is based on Near Field Communication technology (NFC) chip and is fast. However, Apple does not facilitate the access to NFC emulation for other payment providers like GNU Taler. Instead, it only allowed the banking cards emulation.

The EU DMA mandates the gatekeepers like Apple to provide for effective interoperability of both hardware and software features. The NFC chip emulation is an essential hardware feature of iOS and but highly restricted by Apple with [difficult terms and conditions](#) which the smaller free software alternatives like GNU Taler cannot meet.

Building alternatives to gatekeepers with Free Software

There are several smaller Free Software projects that serve as an equivalent alternatives to dominant proprietary ones. Free Software projects and alternative platforms play a crucial role in enhancing competition in the digital markets. These projects offer diverse options and innovative solutions that challenge the dominance of major players like Apple.

Smartphones, tablets, laptops, and other connected devices are powerful general purpose computers. That means users can run any software they want to make full use of the hardware. This potential is fostered by Free Software. Apple's public claims that iPhones and iPads are an exception to this reflect the undertaking's gatekeeper control over its devices. However, in MacOS, Apple removes the need for developers to pay to have their software distributed through an app store that is controlled by Apple. Software freedom in Mac is greater than in iPhones and iPads.

As an example, the users of general purpose computers in mobile ecosystems are able to enjoy the following alternatives²:

Device elements	Free Software alternatives
Operating systems	CalyxOS, PureOS, Plasma Mobile, Ubuntu Touch, /e/
Browsers	Tor Browser, Mozilla Firefox, FOSS Browser, Brave
App stores	F-Droid, The App Fair Project
Messaging apps	Matrix, Signal, XMPP
Email client	K9
Camera	Open Camera, Libcamera
Media player	AntennaPod, Fossify Music Player, VLC media player
Voice, Video conferencing	Jitsi, BigBlueButton
Maps	OpenStreetMaps
Document editor	LibreOffice
Payment provider	GNU Taler
Cloud provider	Nextcloud

Conclusion and recommendations

The DMCCA aims to promote fair competition in digital markets, protect consumer rights, and foster innovation. Free Software represents a viable and fairer alternative to

² This is a non exhaustive list and has illustrative character.

proprietary-dominated environments that lead to monopolisation and restriction to consumer choice, specially in mobile ecosystems. We recommend:

1. **Consider Free Software projects and developers as competitors to SMS's products and services.** The enforcement of the DMCCA should consider Free Software as competitors to SMS players. Free Software can serve as instrument to promote alternatives to undertakings with substantial and entrenched market power.
2. **Pro-competition interventions.** The CMA should actively use its powers to impose pro-competition interventions where necessary. This includes breaking up monopolistic practices, preventing anti-competitive mergers, and fostering an environment where new entrants can thrive. Regular assessments and updates to these interventions will be crucial in adapting to the rapidly evolving digital landscape. In relation to Free Software this includes:
 - Levelling the playing field for Free Software projects and developers in relation to SMSs, specially in mobile ecosystems;
 - Providing regulatory support to smaller and non-profit Free Software alternatives to reduce their compliance burdens;
 - Considering the development and integration of Free Software alternatives to SMSs' proprietary products and services
3. **Encourage Interoperability and Open Standards.** The enforcement of DMCCA provisions should focus on interoperability based on Open Standards enabling seamless integration and data exchange. This will facilitate a more diverse and competitive market where consumers are not locked into a single ecosystem.

Further information

[Device Neutrality and Free Software](#)

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