



**Mozilla’s Response to the Federal Trade Commission’s Advanced
Notice of Proposed Rulemaking on Negative Option Marketing**

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About moz://a

Mozilla's mission is to ensure the internet is a global public resource, open and accessible to all. This means an internet that truly puts people first, where individuals can shape their own experience and are empowered, safe, and independent.

Founded as a community open source project in 1998, Mozilla consists of several organizations. Most notable is Mozilla.org and its wholly owned subsidiary, the Mozilla Corporation, which leads our market-based work, including the development of the open-source Firefox web browser and Gecko, one of only three major browser engines. The Mozilla Corporation and the other subsidiaries under Mozilla.org (Mozilla.ai, Mozilla Foundation, Mozilla Ventures) work in close concert with each other and a global community of tens of thousands of volunteers under the single banner: Mozilla.

Introduction

Mozilla commends the Federal Trade Commission (hereinafter "FTC" or "the Commission") for revisiting the Negative Option Rule to address consumer harm. Negative option marketing like auto-renewals or free-trial conversions occurs widely in digital markets and relies on design choices that interpret consumer inaction as consent. These practices are often embedded in interface and system design choices that manipulate user decision-making, rather than isolated contractual terms. But negative option marketing is not merely a billing issue; it is the byproduct of widely-employed systemic architecture that undermines consumer autonomy in digital environments. Negative option marketing is part of a broader strategy to lock-in consumers, undermine choice, and trick and trap them through harmful design (or "[dark patterns](#)").

The web browser market provides a well-documented case study illustrating how operating systems deploy deceptive design practices to weaponize friction and status-quo bias to influence consumer behavior and limit meaningful choice. As such, Mozilla encourages the Commission to examine the breadth of deceptive design practices that undermine user choice and agency. Specifically, the FTC should investigate harmful design practices not only in negative option marketing, but across a wider range of digital markets. Mozilla welcomes the opportunity to share our relevant experiences in the browser space.

Deceptive design influences consumer behavior through interface and system architecture

Digital markets are increasingly defined not just by the products offered, but by the environments through which users interact with those products. Interfaces are not neutral conduits for information. They are active systems that [shape how users perceive choices](#) and ultimately act. As a result, the impact extends beyond consumer protection and to competition which is also often driven by platforms' efforts to influence user behavior.

Firms increasingly rely on design techniques to steer how users engage with products and services, including whether they enroll in, remain in, or cancel recurring subscriptions. Interface design guides users toward specific, pre-determined outcomes set by profit-driven platforms. Some of these techniques are legitimate – persuasive design can help users make informed decisions by presenting relevant information while preserving user control. However, there are practices that [go further](#), distorting user choice to lock-in users and boost market dominance.

These techniques, often called "dark patterns," are deceptive or manipulative means to take advantage of the power imbalance between firms and consumers. With dark patterns, platforms control not only the information presented, but also the architecture through which that information is experienced. This allows them to alter user journeys in ways that exploit behavioral biases and cognitive limitations.

Negative Option Practices Are Often Implemented Through Deceptive Choice Architecture

Negative option arrangements share a common feature: they interpret a consumer's silence or inaction as consent to be charged. Contemporary marketing strategies most commonly deploy these arrangements online – enrollment in subscription services, acceptance of recurring charges, and the ability to cancel are all mediated through digital interfaces. These practices often unfold in succession, where dark patterns at each stage of digital interaction can influence whether consumers incur or avoid ongoing charges. Even relatively subtle manipulations in interface design can significantly influence user decisions, particularly where users face time pressure, limited attention, or incomplete understanding of the transaction.

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In a controlled experimental study, consumers exposed to dark patterns were more than [twice as likely](#) to enroll in a subscription service compared to a neutral control, with more aggressive designs increasing enrollment rates by nearly fourfold. This is particularly significant, given that negative option marketing is often employed in the subscription context, creating ongoing financial obligations systematically. The study also confirms that these results are consistent when the underlying product and price remain the same, meaning design alone rather than consumer preference drives materially different outcomes.

These findings align with evidence from Mozilla's own research, which documents how digital platforms deploy interface design and steer user behavior in ways that advantage the provider. Mozilla's "[Over the Edge](#)" report, written by independent experts including the researcher who originally coined the term "dark pattern," dives deeper on design architecture, examining methods like preselection, visual interference, and misleading prompts to influence user choice. It focuses particularly on contexts where people are attempting to choose or switch products. Similar tactics are used in subscription flows, where users may be guided toward accepting recurring charges through default selections or obscure disclosures. These practices illustrate how dark patterns translate directly into negative options by increasing enrollment and reducing meaningful engagement with billing terms.

System-Level Manipulation in the Web Browser Market

Harmful design in digital markets does not operate solely at the level of individual interface elements; manipulation is embedded at the system architecture level, including defaults, accounts management structures, and integrations across services. [Control over defaults](#) can limit competition by reducing user mobility and making it more difficult for alternatives to gain traction, particularly where platforms control key access points such as operating systems or app ecosystems. As a browser developer, Mozilla [is aware](#) of how pervasive deceptive design practices are and how regularly consumers are exposed to them.

To understand the role of deceptive design in the browser market, it is important to consider the structure and significance of browsers in the web ecosystem. The web browser is a critical gateway to the internet and a primary interface through which consumers access services and make decisions. This is increasingly the case given the

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developments in AI in recent years - with [new entrants](#) to the browser market generally driven by AI companies seeking to distribute their AI services. To that end, competition in the browser ecosystem plays a significant role in shaping consumer choice and market outcomes. Today, however, digital markets are highly concentrated, in no small part due to large-scale providers [using defaults](#), integration and interface design to steer users to their own products and services over the competition. Such practices can disadvantage independent developers and limit opportunities for competitors to offer alternative services or innovations outside the control of dominant platforms.

Even while we work to protect our users, there is little a competing browser can do when consumers are manipulated to make specific choices. Operating system providers deploy a range of tactics to undermine user choice and agency and to drive them to the operating system's own products. As outlined in [Over the Edge](#), these tactics are particularly prevalent on the Windows operating system, where Microsoft uses harmful design practices to push users to the Edge browser, including:

- **Making it difficult for consumers to find and download alternative browsers.** Deploying techniques such as preselection, visual interference, trick wording, and disguised ads to skew user choice through Edge onboarding screens and banners in the Bing search engine interfering with searches for alternative browsers.
- **Obstructing consumers from setting alternative browsers as their default.** This use of *Obstruction* techniques may involve complex interfaces, additional steps, or unclear settings that create barriers for ordinary users.
- **Overriding user choice of alternatives.** After a consumer successfully changes their default, further prompts may attempt to reverse that choice using visual interference, trick wording, and preselection. In some cases, these prompts include misleading or suggestive visuals (like security-related icons) that wrongly imply reverting to the platform's preferred browser is a safer or more appropriate option.

Ensuring that browser choice is real and effective therefore requires not only addressing structural barriers, but also scrutinizing how design practices, including defaults and user flows, influence consumer decision-making in practice.

Impact of System-Level Manipulation on Users

Consumers often believe they are exercising free choice, but digital systems are often

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structured so that accepting a given option is frictionless, while selecting alternatives or reversing that choice is burdensome. These design choices shape outcomes not because users prefer one option over another, but because the system makes some choices easier than others. Ultimately, these asymmetrical design flows are deliberately engineered to trick and trap consumers into recurring charges or unwanted relationships by exploiting their limited time and attention.

The use of deceptive design to favor affiliated products can result in a range of consumer harms, including:

- **Limited or frustrated choice.** When switching is made difficult, consumers' ability to select alternatives is constrained. This can also deter new entrants and reduce competitive pressure in the market.
- **Financial harm.** Consumers may end up paying more than necessary as firms use harmful design techniques, including negative options.
- **Diminished privacy protections.** Consumers may be left with products that require extensive data collection or expose them to greater privacy risks, reflecting reduced competitive incentives to protect user data.
- **Lower quality.** In markets where services are offered at no monetary cost, competition is expected to occur on quality. Reduced competition can lead to stagnation or decline in product quality.
- **Reduced innovation.** Barriers to competition can limit the development of new features, improvements, and disruptive innovations that benefit consumers.
- **Unfair contractual outcomes.** Where meaningful choice is constrained, consumers may be effectively compelled to accept terms that are not in their interests.

The expansion of these capabilities disproportionately harm vulnerable consumers. Individuals with lower levels of digital literacy, limited time, or cognitive constraints may be more susceptible to manipulative design and less able to navigate complex cancellation processes. [Older consumers](#), in particular, may face higher levels of friction when interacting with multi-step or poorly designed account management systems. As a result, the harms associated with negative option practices are not evenly distributed. They can exacerbate existing inequalities by placing a greater burden on those least able to navigate complex digital environments.

Mozilla's extensive behavioral research on web browsers provides empirical evidence of how interface friction and asymmetry dictate consumer outcomes. While web browsers

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operate differently than subscription billing, the underlying mechanics of consumer manipulation are identical. Our findings demonstrate that if negative option marketers are permitted to introduce friction, interrupt workflows, or use asymmetrical designs for cancellation, consumers will remain trapped by the choice architecture, not by their own preferences. Likewise, consumers should be allowed to choose between products that operate at the same level of the tech stack. This can be done through an interface like what we see in [well-designed browser choice screens](#).

In contrast to dark patterns, choice screens are an example of interface design that can positively impact the choices people make. Through extensive studies, Mozilla has found that they better match consumers with the default browser that they want and help to increase browser contestability, which could impact competition. Choice screens are also overwhelmingly supported by people - In a [Mozilla-led survey](#) of 12,000 people, 98% of them stated that they wanted to be shown a choice screen, with most preferring the screen with more information and greater number of browsers. In addition, those who were shown a choice screen reported being more satisfied with various aspects including their level of control when setting up the device, the time taken to set up the device, and their ability to customize their device settings.

However, choice screens are not a silver bullet. Mozilla's research demonstrates that their effectiveness heavily depends on design and timing; for example, showing a choice screen at first browser use rather than during device set-up can result in a 73% increase in users simply sticking with the pre-set browser. Furthermore, choice screens that interrupt a user's original action increase the likelihood that they will quickly dismiss the screen – by clicking a prominent 'Next' or 'Finish' button – without making a meaningful choice.

Given these dynamics, digital markets would benefit from standards that clarify how to preserve user autonomy and encourage competition.

The FTC Has a Unique Opportunity

The Commission has received tens of thousands of complaints about negative option practices, demonstrating persistent and widespread consumer harm. These complaints reflect not only isolated instances of misconduct, but systemic issues in how digital products and services are designed to shape consumer behavior over time. These dynamics also have broader implications not only for consumer protection but also for competition. When firms use defaults, integration, and design to steer users toward their

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own services, they reduce switching and entrench incumbent advantages.

For these reasons, this rulemaking provides a critical opportunity to modernize consumer protection for the realities of digital markets. In particular, the Commission can:

- **Clarify how deceptive design practices violate Section 5.**

The FTC can make clear that practices which manipulate, coerce, or mislead users through interface design, defaults, or friction fall within the scope of unfair or deceptive acts or practices. This includes not only misleading statements, but also design choices that distort consumer understanding or interfere with their ability to exercise choice. Building on established negative option principles, the Commission should strictly prohibit unreasonable barriers or 'sludge' that impede cancellation. Furthermore, the FTC should prevent companies from relying on technical compliance that does not translate into meaningful, real-world consumer choice.

- **Investigate remedies for digital markets to operate with meaningful consumer choice.**

Research shows consumers have been conditioned to quickly ignore or dismiss pop-ups to return to their original activity. Therefore, remedies that rely on repeated interruptions or 'nagging' are highly likely to be ignored and will fail to facilitate genuine consumer choice. Interventions must be integrated into natural decision points rather than interrupting users mid-task. This includes limiting manipulative defaults, reducing asymmetries between enrollment and cancellation, and addressing system-level practices that create lock-in. Ultimately, these remedies must focus on outcomes, ensuring that consumers can make and act on choices without undue influence or obstruction, regardless of the specific technologies used.

- **Prioritize targeted enforcement against well-documented uses of deceptive design.**

As previously mentioned, research has documented how Microsoft, for example, [deploys](#) interface designs that promote its own browser through preselection, misleading prompts, and barriers to switching. This extends to the rollout of AI services. Such practices may limit consumer choice and merit investigation as part of the Commission's broader effort to address deceptive design.

The FTC is uniquely positioned to address these issues. Its dual mandate over consumer



protection and competition allows it to consider how deceptive design practices affect both individual consumers and market outcomes. By addressing system-level manipulation, the Commission can promote both meaningful consumer choice and fair competition in digital markets.

Conclusion

Negative option marketing is not simply a matter of disclosure or billing practices. It reflects a broader set of design choices that shape how consumers interact with digital services over time. Where these choices rely on manipulation, asymmetrical friction, or misleading presentation, they undermine meaningful consent and consumer autonomy.

The FTC should use this rulemaking, and future enforcement actions, to address deceptive choice architecture and manipulative design practices at-large, ensuring that consumer consent in all markets is genuine and informed.

For any questions regarding this submission, please contact Elise Phillips, Public Policy Manager, at ephillips@mozilla.com.