

*Michael van Oosten*

# iExpire

How Apple's practices turn an unethical  
profit



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It's probably something you've thought yourself; *"Is Apple deliberately slowing down my iPhone to force me to buy the newer model?"* Apple's practices and constant innovation quickly cause hardware to become obsolete as it fails to keep up with the improving software, and the iPhone is deliberately designed to make DIY repairs extremely difficult, forcing users to pay for official repairs or simply buy a new phone when their current model slows down.

There are three main types of obsolescence, according to Vance Packard: **Function**, when an improved model is released that is better than the previous model; **Quality**, when the product breaks down and becomes unusable; and **Desirability**, when the product falls out of favor compared to more popular models. **Planned Obsolescence** is the practice of deliberately designing a product to artificially decrease its lifespan. This can be done by using parts that deteriorate quickly, or introducing software updates that negatively impact the performance of the hardware.

Apple has actually admitted to slowing down older models of the iPhone with software updates. However, the reason they provide is that the loss in performance is to extend the life of the model's older battery. Apple's **Lithium-ion** batteries gradually degrade over time as they are used; each charge cycle decreases the amount of available Lithium-ions within the battery, lowering its maximum charge. This damage is accelerated by trying to run more powerful software - i.e., a new iOS update - using an older battery model. To combat this, Apple added measures to slow down older phone models, to decrease the strain on the battery and increase its lifespan.

The problem is the lack of transparency - Apple made the software tweak on old devices without telling iPhone users. It was only when a software developer pulled apart the programming a year later and showed what was happening that Apple made a statement and explained everything, although Apple has since added **Battery Health** information in the latest iOS versions.

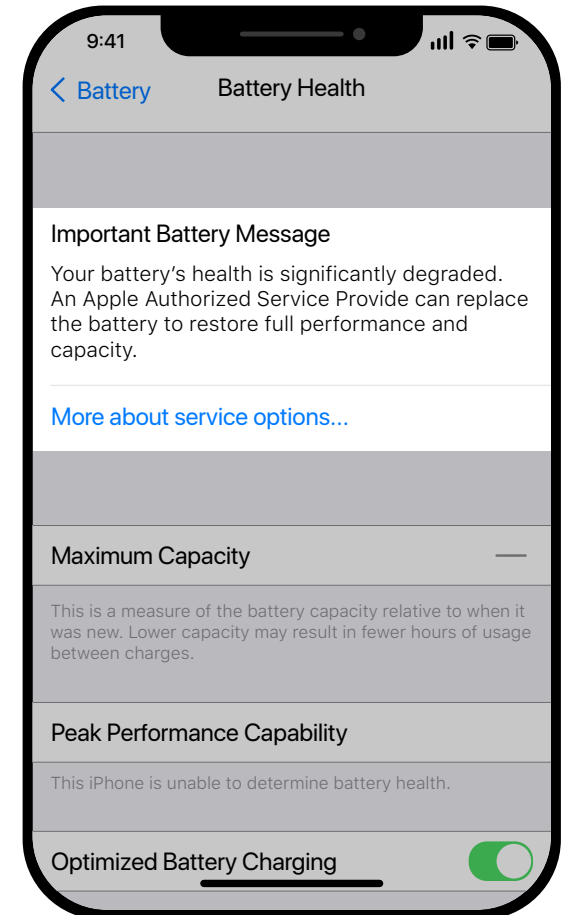


Fig. 1 - The warning that appears when the battery is severely degraded and should be replaced.

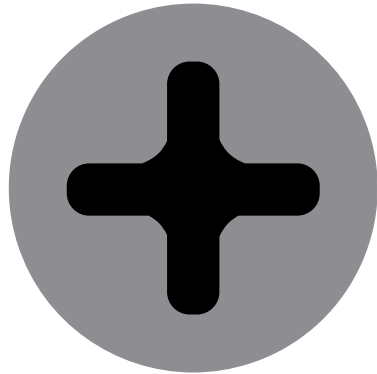


Fig. 2 - A standard Phillip's-head screw, used in the iPhone 3G series. The original iPhone had no screws at all.

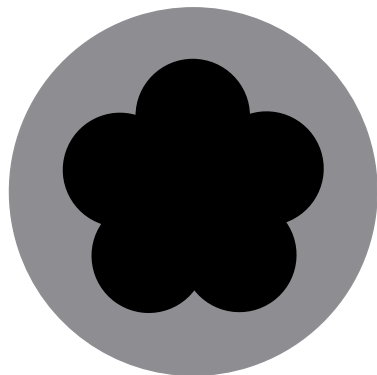


Fig. 3 - The proprietary Pentalobe screw, first used in the 2009 15-inch Macbook Pro and the 2010 iPhone 4.

So the phone slows down because of the old battery - a simple repair and replace, right? Well, no. Apple makes it extremely difficult for users to make repairs to their phones, incentivizing users to either pay hundreds of dollars for the official Apple repair services, or just buy a new phone outright. Apple actively makes it difficult for users to repair their own phones - in 2010, the **iPhone 4** replaced the Phillips screws with non-standard **Pentalobe** screws that require special tools to access the internal components. Components with shorter life-spans, such as the battery, are sometimes glued to the case or placed under delicate circuits to make it that much harder to replace yourself. Newer iPhones use components with **programmed serial codes and verification** - if the phone detects that a part has been installed without using the official Apple services, it will prevent that part from working properly.

There are 3rd-party services that attempt to circumvent Apple's user-unfriendly practices, such as the website **iFixit**. The site provides tutorials and tools

to dismantle and repair Apple devices that would otherwise need to be sent to the official Apple repair service, which charges exorbitant fees. Apple offers an "AppleCare+" service, which for the **\$1700 iPhone 12 Pro** costs **\$269** upfront for 2 years and lets you repair your phone from "accidental" damage for a lower price - but only twice every year. After that, you have to pay the standard repair fees: for the **12 Pro**, the cost to repair the screen is **\$439**; for any other repairs, you'll be paying **\$859**, just over half the original price of the phone.

Apple exploits brand loyalty and the popularity of the iPhone model to coerce consumers into constantly buying new phones as their "current" models become obsolete. The aging batteries and slower performance are just part of the problem - Apple could easily extend the lifespan of older models by making repairs and replacements more accessible and user-friendly. But they choose not to, instead prioritizing profits and manipulating their users.

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Fig. 4 - Google Search Frequency for "iphone slow" from January 2007 - October 2010, with the release dates of each iOS update



Fig. 5 - AppleCare+ vs. Out-of-Warranty Repair Fees

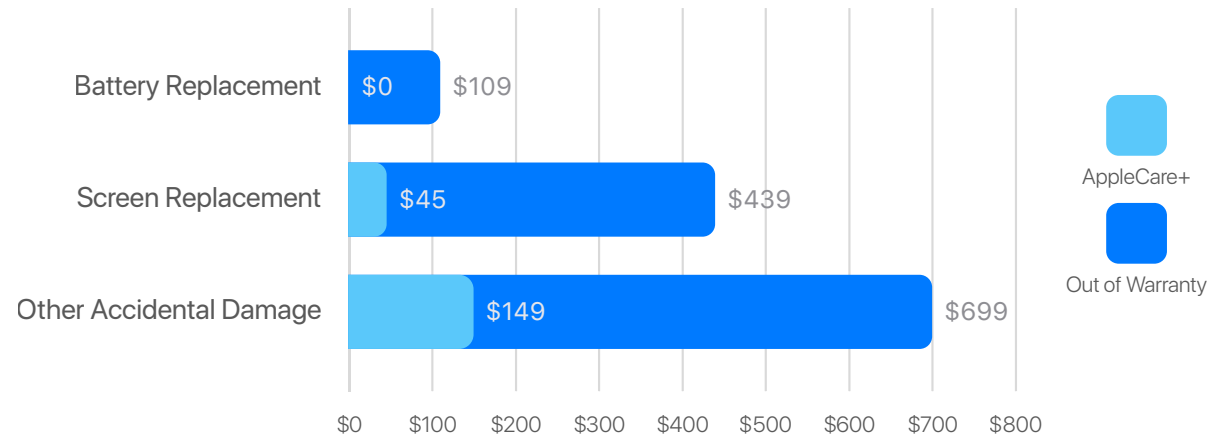


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