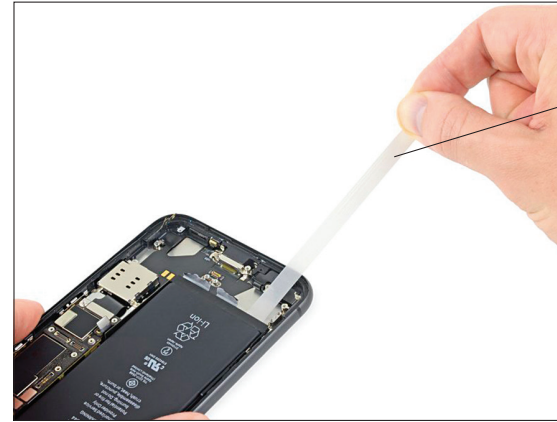# YOUR OWN DEVICES

The Right to Repair movement gains ground

By Elizabeth Evitts Dickinson

In 2003, Kyle Wiens dropped his Apple iBook G3 and broke the charging port. As an engineer in training at California Polytechnic State University in San Luis Obispo, he had a penchant for taking things apart, often with another student named Luke Soules. The two wanted to fix the laptop themselves, but they quickly discovered that there was no owner service manual and that few independent repair shops in their area were licensed to help. They had two options: upgrading to the iBook G4—at a cost of about $1,000—or repairing it on their own. Flying blind, the two disassembled the device on Wiens's dorm room floor, losing a few screws in the process. They managed to solve the issue, and, later, they created a step-by-step repair guide to share online for other DIY fixers. "That was the beginning of realizing that there was a much bigger problem," Wiens told me—namely, that Apple was forcing customers to buy new devices rather than repair the ones they owned. That same year, Wiens and Soules launched what would become iFixit, a website for hosting crowdsourced service manuals and diagrams to demystify modern electronics. The photos here are pulled from iFixit's forty-four-step guide to replacing the battery in an iPhone 11. It starts by highlighting Apple's infamous pentalobe screws, the iPhone's first line of defense against at-home repairs; a user can get past them only if they've purchased a specific screwdriver, such as the one iFixit reverse engineered, which it sells on its website for six dollars.

These days, tens of millions of users come to iFixit looking to repair consumer products, using its guides and purchasing custom tools to tinker with everything from coffee makers to vacuum cleaners. As the website has gained prominence, its founders have taken a firm stance against planned obsolescence: a manufacturing strategy advanced by the tech industry that drives products to swift extinctions and discourages self-repair. "If you can't fix it, you don't own it," reads an iFixit manifesto. Wiens and his colleagues are part of a larger movement called Right to Repair, a global advocacy effort that began in the early 2000s and lobbies manufacturers to use standardized parts. They have helped write model legislation meant to ensure that individuals and independent repair shops have access to the tools, manuals, software, and services necessary to repair devices.

Short battery life is one of the most pernicious iPhone features. To replace an iPhone 11 battery—which typically loses its charge capacity after eighteen to twenty-four months, according to iFixit—a user must carefully pull and remove the delicate adhesive strip seen here. Otherwise, they may simply have to upgrade. Such rigid life spans not only drive consumption, but foster consumer dependence and muddy the concept of ownership: just as a phone survives only as long as its battery, or until software outpaces the model, use of a Kindle book is restricted to Amazon's platform. After years of fielding complaints and petitions from advocates like Wiens, the Federal Trade Commission agreed in late 2020 to look into the issue of repair rights. In May 2021, the agency released a report concluding that device makers have "steered consumers into manufacturers' repair networks or to replace products before the end of their useful lives," and that there is "scant evidence" to support manufacturers' claims that their restrictions protect consumers and foster innovation. Last summer, President Joe Biden signed an executive order in support of self-repair laws and increased oversight.

Apple executives have traditionally opposed self-repair by arguing that it poses safety risks to users. But in a major reversal following Biden's order, the company announced a new self-repair program. Starting this year, Apple will let customers access parts, tools, and manuals to make common repairs to the iPhone 12 and 13, including to the battery, camera, and screen. Eventually, the program will expand to include Macs. The policy is a big concession to the Right to Repair movement—or, perhaps, an attempt to get ahead of regulation—and advocates eagerly welcomed the news. But many remain skeptical. ("*Do not* pop the champagne," a newsletter called *Fight to Repair* cautioned.) It's unclear, for example, whether older iPhone models—like the one in these photos—will ever be included in Apple's program, or if groups like iFixit will still need to fill in the gaps. Apple's plan also requires customers to order parts and tools directly from the company, which some advocates worry might be prohibitively expensive. While Wiens celebrates Apple's decision, he doesn't see it as a revolutionary shift. "Apple will bless your repair," he says, "only if you use a part you've purchased from them."

Planned obsolescence has been a fixture of American manufacturing since the Twenties, when Ford and General Motors began regularly updating car models. By the Fifties, trade publications hailed the practice of "death dating" as a key feature of a thriving economy. In recent decades, as Aaron Perzanowski argues in his book *The Right to Repair: Reclaiming the Things We Own*, software restrictions, pricing strategies, and marketing tactics have accelerated repair deterrence across industries, affecting everything from cameras to medical devices to John Deere tractors. To a certain degree, DIY fixers have been able to adapt to manufacturers' challenges. The glass screens of iPhones—the "flat tires of the digital era," as Perzanowski puts it—often need to be replaced, and Apple's addition of a strong adhesive made them especially difficult to remove. An iFixit team member who is a massage therapist came up with a clever solution called the iOpener: a gel pad, similar to those used in massage therapy, that can be applied to warm and loosen the glue. At one point, however, Apple added another deterrent to the iPhone 13: without licensed Apple software, removing the screen disabled the facial recognition technology that unlocked the device. (After iFixit criticized the issue, Apple solved it in a software update.)

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Even with its caveats, Apple's policy change is evidence that the Right to Repair movement has gained footing. As of 2022, more than twenty states have introduced legislation that would expand the rights of individual consumers and repair shops across various industries. Without these checks, Perzanowski says, our economy risks entrenching obsolescence, the consequences of which stretch far beyond the life spans of individual phones. And it's not just the consumer economy: crucial technology for health care providers, the military, and government agencies is also designed to "move control out of the hands of the would-be owners," Perzanowski says, "and into the hands of the manufacturers and the sellers of these products." As Big Tech comes under increasing federal scrutiny, the role of independent repairers—the pirates sailing the monopolized seas—shouldn't be underestimated. ∎

Photographs courtesy iFixit